

# CRS Report for Congress

## Coast Guard Deepwater Acquisition Programs: Background, Oversight Issues, and Options for Congress

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Ronald O'Rourke  
Specialist in Naval Affairs  
Foreign Affairs, Defense, and Trade Division



Prepared for Members and  
Committees of Congress

# Coast Guard Deepwater Acquisition Programs: Background, Oversight Issues, and Options for Congress

## Summary

The term Deepwater refers to a collection of more than a dozen Coast Guard acquisition programs for replacing and modernizing the service's aging fleet of deepwater-capable ships and aircraft. Until April 2007, the Coast Guard had pursued these programs as a single, integrated acquisition program that was known as the Integrated Deepwater System (IDS) program or Deepwater program for short. The now-separated Deepwater acquisition programs include plans for, among other things, 91 new cutters, 124 new small boats, and 247 new or modernized airplanes, helicopters, and unmanned aerial vehicles (UAVs).

The Coast Guard, which is part of the Department of Homeland Security (DHS), requested \$990.4 million in FY2009 acquisition funding for Deepwater programs. The FY2009 DHS appropriations act was passed as Division D of H.R. 2638/P.L. 110-329 of September 30, 1008, a consolidated appropriations act. H.R. 2638/P.L. 110-329 provides \$1,034.0 million in FY2009 acquisition funding for Deepwater programs.

The year 2007 was a watershed year for Deepwater acquisition. The management and execution of what was then the single, integrated Deepwater program was strongly criticized by various observers. House and Senate committees held several oversight hearings on the program. Bills were introduced to restructure or reform the program in various ways. Coast Guard and industry officials acknowledged certain problems in the program's management and execution and defended the program's management and execution in other respects. The Coast Guard announced a number of reform actions that significantly altered the service's approach to Deepwater acquisition (and to Coast Guard acquisition in general).

A June 2008 Government Accountability Office (GAO) report on Deepwater acquisition found that "Coast Guard leadership is making positive changes to its management and acquisition approach to the Deepwater Program that should put it in a position to realize better outcomes, although challenges to its efforts remain."

Potential oversight issues for Congress include but are not necessarily limited to the Coast Guard's overall management of Deepwater acquisition, the status of certain Deepwater acquisition programs, and the so-called revolving door issue. This report will be updated as events warrant.

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# Coast Guard Deepwater Acquisition Programs: Background, Oversight Issues, and Options for Congress

## Introduction

The term Deepwater refers to a collection of more than a dozen Coast Guard acquisition programs for replacing and modernizing the service's aging fleet of deepwater-capable ships and aircraft. Until April 2007, the Coast Guard had pursued these programs as a single, integrated acquisition program that was known as the Integrated Deepwater System (IDS) program or Deepwater program for short. The now-separated Deepwater acquisition programs include plans for, among other things, 91 new cutters, 124 new small boats, and 247 new or modernized airplanes, helicopters, and unmanned aerial vehicles (UAVs).

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Potential oversight issues for Congress include but are not necessarily limited to the Coast Guard's overall management of Deepwater acquisition, the status of certain Deepwater acquisition programs, and the so-called revolving door issue.

## Background

### Deepwater Missions

The Coast Guard performs a variety of missions in the deepwater environment, which generally refers to waters more than 50 miles from shore. These missions include search and rescue, drug interdiction, alien migrant interdiction, fisheries enforcement, marine pollution law enforcement, enforcement of lightering (i.e., at-sea cargo-transfer) zones, the International Ice Patrol in northern waters, overseas inspection of foreign vessels entering U.S. ports, overseas maritime intercept (sanctions-enforcement) operations, overseas port security and defense, overseas peacetime military engagement, and general defense operations in conjunction with the Navy. Deepwater-capable assets are also used closer to shore for various operations.

### Origin of Deepwater Acquisition Effort

The Coast Guard initiated the Deepwater acquisition effort in the late 1990s, following a determination by the Coast Guard that many of its existing (i.e., “legacy”) deepwater-capable legacy assets were projected to reach their retirement ages within several years of one another. The Coast Guard’s legacy assets at the time included 93 aging cutters and patrol boats and 207 aging aircraft. Many of these ships and aircraft are expensive to operate (in part because the cutters require large crews), increasingly expensive to maintain, technologically obsolete, and in some cases poorly suited for performing today’s deepwater missions.

### Structure of Deepwater Acquisition Effort

**Structure Until 2007.** Until 2007, the Coast Guard pursued Deepwater acquisition through a single, performance-based, system-of-systems acquisition program that used a private-sector lead system integrator (LSI):

- **System-of-Systems Acquisition.** Rather than replacing its deepwater-capable legacy assets through a series of individual acquisition programs, the Coast Guard initially decided to pursue the Deepwater acquisition effort as an integrated, system-of-systems acquisition, under which a combination of new and modernized cutters, patrol boats, aircraft, along with associated C4ISR<sup>1</sup> systems and logistics support, would be procured as a single, integrated package (i.e., a system of systems). The Coast Guard believed that a system-of-systems approach would permit Deepwater acquisition to be optimized (i.e., made most cost effective) at the overall Deepwater system-of-systems level, rather than suboptimized at the level of individual Deepwater platforms and systems.

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<sup>1</sup> C4I stands for command, control, communications, computers, intelligence, surveillance, and reconnaissance.

- **Private-Sector Lead Systems Integrator (LSI).** To execute this system-of-systems acquisition approach, the Coast Guard initially decided to use a private-sector lead system integrator (LSI) — an industry entity responsible for designing, building, and integrating the various elements of the package so that it met the Coast Guard’s projected deepwater operational requirements at the lowest possible cost.<sup>2</sup> The Coast Guard decided to use a private-sector LSI in part because the size and complexity of the Deepwater program was thought to be beyond the system-integration capabilities of the Coast Guard’s relatively small in-house acquisition work force.
- **Performance-Based Acquisition.** The Coast Guard initially pursued the Deepwater program as a performance-based acquisition, meaning that the Coast Guard set performance requirements for the program and permitted the private-sector LSI some latitude in determining how the various elements of the Deepwater system would meet those requirements.

The Coast Guard conducted a competition to select the private-sector LSI for the Deepwater program. Three industry teams competed, and on June 25, 2002, the Coast Guard awarded the role to Integrated Coast Guard Systems (ICGS) — an industry team led by Lockheed Martin and Northrop Grumman Ship Systems (NGSS). ICGS was awarded an indefinite delivery, indefinite quantity (ID/IQ) contract for the Deepwater program that included a five-year baseline term that ended in June 2007, and five potential additional award terms of up to five years (60 months) each. On May 19, 2006, the Coast Guard announced that it was awarding ICGS a 43-month first additional award term, reflecting good but not excellent performance by ICGS. With this additional award term, the contract has been extended to January 2011.

**Revised Structure Since 2007.** In 2007, as the Coast Guard’s management and execution of the then-integrated Deepwater program was being strongly criticized by various observers, the Coast Guard announced a number of reform actions that significantly altered the service’s approach to Deepwater acquisition (and to acquisition in general). As a result of these reforms, the Coast Guard, among other things, stopped pursuing Deepwater acquisition through a single, performance-based, system-of-systems acquisition program that used a private-sector LSI, and began pursuing Deepwater acquisition as a collection of individual, defined-based acquisition programs, with the Coast Guard assuming the lead role as systems integrator for each:

- **Individual Programs.** Although Deepwater acquisition programs still appear in the budget under the common heading IDS, the Coast Guard is now pursuing Deepwater acquisition programs as individual programs, rather than as elements of a single, integrated

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<sup>2</sup> For more on private-sector LSIs, see CRS Report RS22631, *Defense Acquisition: Use of Lead System Integrators (LSIs)—Background, Oversight Issues, and Options for Congress*, by Valerie Bailey Grasso.

program. The Coast Guard states that it is still using a systems approach to optimizing its acquisition programs, including the Deepwater acquisition programs, but that the system being optimized is now the Coast Guard as a whole, as opposed to the Deepwater subset of programs.

- **Coast Guard as System Integrator.** The Coast Guard announced in April 2007 that, among other things, it would assume the lead role as systems integrator for all Coast Guard Deepwater assets (as well as other major Coast Guard acquisitions as appropriate). The Coast Guard is phasing out its reliance on ICGS as a private-sector LSI for Deepwater acquisition, and shifting system-integration responsibilities to itself. To support this shift, the Coast Guard is increasing its in-house system-integration capabilities.
- **Defined-Based Acquisition.** The Coast Guard has decided to shift from performance-based acquisition to the use of more-detailed specifications of the capabilities that various Deepwater assets are to have. The Coast Guard states that although this new approach involves setting more-detailed performance specifications, it does not represent a return to minutely-detailed specifications such as the Military Specification (MilSpec) system once used in Department of Defense (DOD) acquisition programs. The Coast Guard refers to its new approach as defined-based acquisition.

The Coast Guard has stated that the 43-month award term with ICGS is being used to complete Deepwater acquisition efforts already underway. Task orders issued under the award term, the Coast guard has stated, are for performance periods of not more than 18 months, with the aim of closing out these efforts. By July 1, 2007, the Coast Guard has stated, only three Deepwater contract line item numbers (CLINs) remained with ICGS — those for the National Security Cutter (NSC), the Maritime Patrol Aircraft (MPA), and C4ISR integration.

The Coast Guard states that as of late-April 2008, its in-house acquisition and program-management staff included 946 people. The Coast Guard's goal is to increase that figure to about 1,000. The Coast Guard states that as of late-April 2008, there were shortfalls within the Coast Guard's acquisition and program-management staff in the areas of contract officers and certain other specialities. The Coast Guard stated that it is addressing these shortfalls through new hiring and training, and that the effort to overcome these shortfalls might be complete within about 24 months, depending on budgets and the hiring environment.

The Coast Guard states that it will continue to use the services of independent, third-party sources of support, including the Navy. The Coast Guard states that "government program management will be performed by uniformed or civilian Coast Guard members, other government agencies[,] and support contractors (e.g., the American Bureau of Shipping [ABS]). The support contractors working directly on



government program management tasks as directed by the Cost Guard will be selected in accordance with the Federal Acquisition Regulations.”<sup>3</sup>

## Deepwater Assets Planned for Acquisition<sup>4</sup>

**2006 Acquisition Program Baseline.** Table 1 shows the Deepwater assets planned for acquisition under the November 2006 Deepwater Acquisition Program Baseline (APB), and the estimated acquisition cost of these assets in then-year dollars. As shown in the table, the Coast Guard estimates the total acquisition cost of these assets at \$24.23 billion in then-year dollars. Acquisition funding for these assets is scheduled to be completed in FY2025, and the buildout of the assets is scheduled to be completed in 2027.

**Table 1. Deepwater Assets Planned for Acquisition**  
(with acquisition costs in millions of then-year dollars)

Qty.	Item	Cost
<i>Air assets</i>		
6	Missionized HC-130J Long Range Surveillance (LRS) aircraft (cost of missionization)	11
16	Modernized and upgraded HC-130H LRS aircraft (cost of modernization and upgrading)	610
36	New HC-144A Medium Range Surveillance (MRS) aircraft (also called Maritime Patrol Aircraft, or MPA) based on the European Aeronautic Defence and Space Company (EADS)/CASA CN-235 Persuader MPA aircraft design	1,706
42	Modernized and upgraded MH-60T Medium Range Recovery (MRR) helicopters (cost of modernization and upgrading)	451
102	Modernized and upgraded HH-65C Multi-Mission Cutter Helicopters (MCHs) (cost of modernization and upgrading)	741
45	New vertical take-off unmanned aerial vehicles (VUAVs), also called unmanned aircraft systems (UASs)	503
<i>Subtotal air assets</i>		<b>4,022</b>
<i>Surface assets</i>		
8	New National Security Cutters, or NSCs, displacing about 4,000 tons each (i.e., ships analogous to today’s high-endurance cutters)	3,450
25	New Offshore Patrol Cutters, or OPCs, displacing about 3,200 tons each (i.e., ships analogous to today’s medium-endurance cutters)	8,098

<sup>3</sup> Source for information in this paragraph and the preceding paragraph: Coast Guard briefing to CRS on the Deepwater program, April 28, 2008. For additional information on the Coast Guard’s plan for increasing its in-house acquisition and program-management capabilities, see Department of Homeland Security, United States Coast Guard, *Acquisition Human Capital Strategic Plan*, Washington, 2008.

<sup>4</sup> Additional background information on Deepwater acquisition programs is available at the Coast Guard’s acquisition website at [<http://www.uscg.mil/acquisition/>].

46	New Fast Response Cutters — Class A (FRC-As) displacing roughly 200 tons each, to replace most of the Coast Guard's existing 110-foot Island-class patrol boats	2,613
12	New Fast Response Cutters — Class B (FRC-Bs) displacing roughly 200 tons each, to replace the rest of the Coast Guard's existing 110-foot Island-class patrol boats	593
27	Medium Endurance Cutters (MECs) upgraded with a Mission Effectiveness Project (MEP) (cost of upgrading)	317
17	Patrol boats (PBs) upgraded with a MEP (cost of upgrading)	117
124	New small boats for Deepwater cutters, including 33 Long-Range Interceptors (LRIs) and 91 Short-Range Prosecutors (SRPs)	110
8	110-foot Island-class PBs converted into 123-foot PBs (cost of conversion; program not successful and halted after 8 boats)	95
<i>Subtotal surface assets</i>		<i>15,393</i>
<i>C4ISR systems</i>		
—	Common operational picture	1,071
—	Shore systems	102
—	Cutter upgrades	180
<i>Subtotal C4ISR systems</i>		<i>1,353</i>
<i>Integration and oversight</i>		
—	System engineering and oversight	1,118
—	Government program management	1,518
—	Technology obsolescence prevention	345
—	Logistics and infrastructure upgrades	481
<i>Subtotal integration and oversight</i>		<i>3,462</i>
<b>TOTAL</b>		<b>24,230</b>

**Source:** Deepwater Acquisition Program Baseline (APB) approved November 7, 2006.

Although **Table 1** shows 12 FRCs and 46 FRC-Bs, the Coast Guard's Request for Proposals (RFP) for the FRC-B program includes options for building up to 34 FRC-Bs (which, if exercised, would reduce the number of FRC-As to as few as 24). The Coast Guard has also stated that if the FRC-Bs fully meet the requirements for the FRC, all 58 of the FRCs might be built to the FRC-B design.

**2008 Alternatives Analysis (AA).** Between September 2007 and February 2008, the Coast Guard conducted a reevaluation of the mix of assets to be procured under the Deepwater program in a study called an Alternatives Analysis (AA). The study examined alternative platforms for the NSC, OPC, FRC, MPA, and VUAV. The study suggested that the Coast Guard consider a number of alternatives regarding the Deepwater asset mix and concluded that, regardless of the asset mix, the Coast Guard has infrastructure funding and scheduling shortfalls that need to be addressed.<sup>5</sup>

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<sup>5</sup> Michael Bruno, "Alternatives Analysis Spurs Coast Guard UAS Search," *Aerospace Daily & Defense Report*, February 12, 2008; Philip Ewing, "Report: CG May Need Fewer Big Cutters," *NavyTimes.com*, March 5, 2008; Bettina Chavanne and Michael Bruno, "Official (continued...)"

The Coast Guard states that the study “generally confirms and reinforces the Coast Guard’s approach to Deepwater asset procurement plans,” including the continuation of the NSC and MPA as planned, and the need for the OPC and FRC.<sup>6</sup> The study has not resulted in changes in the planned mix of air and surface assets shown in **Table 1**.

## Examples of Deliveries of Deepwater Assets<sup>7</sup>

Examples of deliveries and other milestones for Deepwater assets include the following:

- The Coast Guard commissioned into service the first NSC on August 4, 2008. The second NSC was christened (formally named) on July 26, 2008; the ship is scheduled to begin sea trials in 2009.
- The first missionized HC-130J was accepted by the Coast Guard on February 29, 2008, and a total of three were accepted as of May 12, 2008. The Coast Guard awarded a contract to ICGS to missionize the fourth HC-130J on August 29, 2008. The estimated date for completing the missionization of the fourth aircraft is the first quarter of FY2010.
- The first HC-144A was accepted by the Coast Guard on March 10, 2008, and a total of five were accepted as of the end of July 2008. Three additional aircraft are on contract and scheduled for delivery to the Coast Guard by February 2009.
- The Coast Guard began major work on the prototype MH-60T conversion in March 2006 and completed the effort in December 2007. The project completed developmental testing in March 2008.
- As of September 16, 2008, the Coast Guard had configured and delivered 21 MH-65Cs, which include the installation of Airborne Use of Force (AUF) equipment kits.

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<sup>5</sup> (...continued)

Study Notes Coast Guard Acquisition Shortfalls,” *Aerospace Daily & Defense Report*, March 7, 2008; Geoff Fein, “Coast Guard Agrees With AA On Almost All Recommendations,” *Defense Daily*, March 10, 2008; Zachary M. Peterson, “Re-Analysis Validates Coast Guard’s Way Ahead With Deepwater,” *Inside the Navy*, March 10, 2008; Bettina H. Chavanne, “USCG Will Not Rebaseline Deepwater Despite Alternatives Analysis,” *Aerospace Daily & Defense Report*, March 12, 2008: 1-2.

<sup>6</sup> Source: Coast Guard briefing to CRS on the Deepwater program, April 28, 2008.

<sup>7</sup> Information in this section is taken primarily from the Coast Guard Acquisition Directorate’s web page on acquisition programs and projects:  
[<http://www.uscg.mil/acquisition/programs/acquisitionprograms.asp>]

## Deepwater Acquisition Funding

**Prior-Year Funding.** Table 2 below shows prior-year acquisition funding for Deepwater acquisition programs. As can be seen in the table, the programs have received a net total of about \$6.1 billion in acquisition funding through FY2009, including \$1,034.0 million in FY2009.

**Table 2. Prior-year Deepwater Acquisition Funding**  
(in millions of dollars, rounded to nearest tenth)

	Prior <sup>a</sup>	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
Request	n/a	320.2	500.0	500.0	678	966.0	934.4	836.9	990.4
Appropriation	n/a	320.2	478.0	668.2	724.0	933.1	1065.9	783.3	1034.0
Rescissions	n/a		3.1	57.6	38.9	98.7		132.4	
Transfers	n/a				49.7	77.8	78.7		
Supplemental appropriations	n/a					124.2			
<b>Total<sup>b</sup></b>	<b>117.0</b>	<b>320.2</b>	<b>474.9</b>	<b>610.6</b>	<b>734.8</b>	<b>1036.4</b>	<b>1144.6</b>	<b>650.8</b>	<b>1034.0</b>
<b>Cumulative total<sup>b</sup></b>	<b>117.0</b>	<b>437.2</b>	<b>912.1</b>	<b>1522.7</b>	<b>2257.5</b>	<b>3293.9</b>	<b>4438.5</b>	<b>5089.3</b>	<b>6123.3</b>

**Source:** Prepared by CRS using Coast Guard data provided on January 29, 2007 (FY2007 and prior years), and FY2008 Consolidated Appropriations Act (FY2008). Totals may not add due to rounding.

n/a = not available

a. Pre-award funding prior to 2002.

b. Excludes HC-130J funding prior and airborne use-of-force funding prior to FY2007.

**Requested and Planned Funding for FY2009-FY2013.** Table 3 shows acquisition funding requested for Deepwater programs in FY2009, and planned for Deepwater programs for FY2010-FY2013.

As shown in the table, the Coast Guard has requested \$990.4 million in acquisition funding for FY2009 for Deepwater programs, including \$231.3 million for Deepwater air assets, \$540.7 for Deepwater surface assets, and \$218.4 million for other Deepwater programs.

The funding requested in FY2009 for air assets would fund the delivery of two HC-144As; engine sustainment and upgrades to avionics, wiring, and sensors for eight HH-60 helicopters; modernization work on 22 HH-65 helicopters; and project analysis for the VUAV.

**Table 3. FY2008-FY2013 Deepwater Acquisition Funding**  
(in millions of dollars, rounded to nearest tenth)

	FY08 enacted	FY09 requested	FY10 planned	FY11 planned	FY12 planned	FY13 planned	
<i>Air assets</i>							
Maritime Patrol Aircraft	170.0	86.6	175.2	119.4	61.1	47.0	
HH-60 Conversion	57.3	52.7	52.4	21.4	12.8	31.9	
HH-65 Conv./Sust. <sup>a</sup>	50.8	64.5	72.8	73.1	69.9	30.0	
HC-130H Conv./Sust. <sup>a</sup>	18.9	24.5	55.3	89.2	93.3	96.5	
HC-130J Fleet Intro. <sup>a</sup>	5.8	0	0	0	0	0	
Armed Helo Equip. <sup>a</sup>	24.6	0	0	0	0	0	
UAS <sup>a</sup>	0	3.0	0	0	0	0	
<i>Subtotal aircraft</i>	<i>327.4</i>	<i>231.3</i>	<i>355.7</i>	<i>303.1</i>	<i>237.1</i>	<i>205.4</i>	
<i>Surface assets</i>							
NSC	165.7	353.7	142.9	501.3	506.4	511.3	
OPC	0	3.0	0	0	25.0	70.0	
FRC-B	0	115.3	243.0	73.0	0	0	
Deepwater small boats	2.7	2.4	2.9	3.0	3.1	3.6	
WMEC sustainment <sup>a</sup>	34.5	35.5	36.6	37.7	41.8	36.9	
Patrol boats sustainment	40.5	30.8	17.5	7.5	0.5	0	
FRC-A	0	0	0	5.0	50.0	5.0	
<i>Subtotal surface ships</i>	<i>243.4</i>	<i>540.7</i>	<i>442.9</i>	<i>627.5</i>	<i>626.8</i>	<i>626.8</i>	
<i>Other</i>							
Govt. program mgt.	50.5	58.0	50.0	53.0	52.0	53.0	
Systems eng. and int. <sup>a</sup>	35.1	33.1	35.0	36.0	37.0	37.7	
C4ISR	89.6	88.1	45.0	60.6	45.0	40.0	
Deepwater logistics	36.5	37.7	38.6	38.6	37.6	36.6	
Tech. Obsol. Prev. <sup>a</sup>	0.7	1.5	1.9	1.8	1.8	4.6	
<i>Subtotal other</i>	<i>212.5</i>	<i>218.4</i>	<i>170.5</i>	<i>190.0</i>	<i>173.4</i>	<i>171.9</i>	
<b>TOTAL FY2008</b>	<b>783.3</b>	<b>990.4</b>	<b>969.1</b>	<b>1120.6</b>	<b>1037.3</b>	<b>1004.0</b>	
<i>Rescissions of prior-year funding</i>							
OPC	98.6	0	0	0	0	0	
VUAV	33.8	0	0	0	0	0	
<i>Subtotal rescissions</i>	<i>132.4</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	
<b>NET TOTAL</b>	<b>650.8</b>	<b>990.4</b>	<b>969.1</b>	<b>1120.6</b>	<b>1037.3</b>	<b>1004.0</b>	

**Source:** U.S. Coast Guard Posture Statement With [FY] 2009 Budget in Brief, p. 49 (Table 4). Totals may not add due to rounding.

a. Conv./Sust. is Conversion/Sustainment Projects; Fleet Intro. is Fleet Introduction; Armed Helo. Equip. is Armed Helicopter Equipment (Airborne Use of Force); UAS is Unmanned Aircraft System; WMEC is medium-endurance cutter; eng. and int. is engineering and integration; Tech. Obsol. Prev. is Technology Obsolescence Prevention.

The funding requested in FY2009 for surface assets would fund the completion of the fourth NSC; the production of three FRCs; the operational enhancement of five Medium Endurance Cutters; the operational enhancement of three 110-foot patrol boats; analysis of requirements for the OPC; and development and production of a cutter small boat.

## Criticism of Deepwater Management in 2007

The management and execution of the then-integrated Deepwater program was strongly criticized in 2007 by the DHS Inspector General (IG),<sup>8</sup> GAO,<sup>9</sup> the Defense Acquisition University (DAU) (whose analysis was requested by the Coast Guard),<sup>10</sup> several Members of Congress from committees and subcommittees that oversee the Coast Guard, and other observers. House and Senate committees held several oversight hearings on the program, at which non-Coast Guard, non-ICGS witnesses, as well as several Members of Congress, strongly criticized the management and execution of the program. Criticism focused on overall management of the program, and on problems in three cutter acquisition efforts — the NSC, the modernization of the 110-foot patrol boats, and the FRC. For a more detailed discussion, see **Appendix A**.

## Coast Guard Reform Actions in 2007

In 2007, as the Coast Guard's management and execution of the then-integrated Deepwater program was being strongly criticized by various observers, the Coast

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<sup>8</sup> See, for example, Statement of Richard L. Skinner, Inspector General, U.S. Department of Homeland Security, Before the Committee on Transportation and Infrastructure, Subcommittee on Coast Guard and Maritime Transportation, U.S. House of Representatives, "Deepwater: 120-Day Update," June 12, 2007; as well as Department of Homeland Security, Office of Inspector General, *Acquisition of the National Security Cutter*, OIG -07-23, January 2007 (available online at [[http://www.dhs.gov/xoig/assets/mgmttrpts/OIG\\_07-23\\_Jan07.pdf](http://www.dhs.gov/xoig/assets/mgmttrpts/OIG_07-23_Jan07.pdf)]); Department of Homeland Security, Office of Inspector General, 110'/123' Maritime Patrol Boat Modernization Project, OIG -07-27, January 2007 (available online at [[http://www.dhs.gov/xoig/assets/mgmttrpts/OIG\\_07-27\\_Feb07.pdf](http://www.dhs.gov/xoig/assets/mgmttrpts/OIG_07-27_Feb07.pdf)]); U.S. Department of Homeland Security, Office of Inspector General, *Major Management Challenges Facing the Department of Homeland Security (Excerpts from the FY 2006 DHS Performance and Accountability Report)*, December 2006. (OIG-07-12); and U.S. Department of Homeland Security, Office of Inspector General, *Improvements Needed in the U.S. Coast Guard's Acquisition and Implementation of Deepwater Information Technology Systems*, August 2006. (Office of Information Technology, OIG-06-55).

<sup>9</sup> See, for example, Government Accountability Office, *Coast Guard[:] Challenges Affecting Deepwater Asset Deployment and Management and Efforts to Address Them*, GAO-07-874, June 2007; Government Accountability Office, *Coast Guard[:] Status of Efforts to Improve Deepwater Program Management and Address Operational Challenges*, Statement of Stephen L. Caldwell, Acting Director Homeland Security and Justice Issues, Testimony Before the Subcommittee on Coast Guard and Maritime Transportation, Committee on Transportation and Infrastructure, House of Representatives, GAO-07-575T, March 8, 2007; and Government Accountability Office, *Coast Guard[:] Coast Guard Efforts to Improve Management and Address Operational Challenges in the Deepwater Program*, Statement of Stephen L. Caldwell, Acting Director Homeland Security and Justice Issues, Testimony Before the Subcommittee on Oceans, Atmosphere, Fisheries, and Coast Guard, Committee on Commerce, Science and Transportation, U.S. Senate, GAO-07-460T, February 14, 2007.

<sup>10</sup> Defense Acquisition University, *Quick Look Study, United States Coast Guard Deepwater Program*, February 2007.

Guard announced a number of reform actions that significantly altered the service's approach to Deepwater acquisition (and to Coast Guard acquisition in general). For a more detailed discussion, see **Appendix B**.

## Justice Department Investigation

On April 18, 2007, it was reported that the Justice Department was conducting an investigation of the Deepwater program. Press reports at the time stated that investigation centered on communications systems, the conversion of the Coast Guard's 110-foot patrol boats, and the National Security Cutter (NSC). The Justice Department reportedly notified Lockheed, Northrop, and certain other firms involved in the Deepwater program of the investigation on December 13, 2006, and directed the firms to preserve all documents relating to the program.<sup>11</sup>

## Oversight Issues for Congress

Potential oversight issues for Congress include but are not necessarily limited to the Coast Guard's overall management of Deepwater acquisition, the status of certain Deepwater acquisition programs, and the so-called revolving door issue.

## Overall Management

**Coast Guard Perspective.** In addition to implementing the 2007 Deepwater reform actions outlined **Appendix A** of this report, the Coast Guard stated that as of late-April 2008, the service had implemented 54 of 102 actions recommended in its *Blueprint for Acquisition Reform*, the document that sets forth the Coast Guard's plan for reforming its acquisition activities.<sup>12</sup> The remaining actions currently in the plan, the Coast Guard stated, are to be completed by July 2009. The Coast Guard stated that the document is to be updated in July 2008 to include additional goals to be completed by July 2010 and perhaps also July 2009. The Coast Guard also stated that it has implemented most of the recommendations made by GAO for reforming management of Deepwater acquisition, and is working on implementing the remainder. (See discussion below on GAO perspective.) The Coast Guard is also now using a document called the *Major Systems Acquisition Manual (MASM)* as a standard guide for its various acquisition programs.

The Coast Guard notes that although problems occurred with the cutter acquisition programs and the VUAV program, many other elements of the Deepwater

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<sup>11</sup> Ana Radelat, "Justice Investigating Deepwater Contractors," *NavyTimes.com*, April 18, 2007; Chris Strohm, "Deepwater Contractors Face Justice Probe" *GovExec.com*, April 19, 2007; Patricia Kime, "Justice Investigating Deepwater Contract," *NavyTimes.com*, April 20, 2007.

<sup>12</sup> United States Coast Guard, Acquisition Directorate, *Blueprint For Acquisition Reform*. Washington, 2007. 61 pp. (This citation is for Version 2.0 of the document, which is dated July 13, 2007 and is available at [<http://www.uscg.mil/acquisition/newsroom/pdf/blueprintforacquisitionreform.pdf>].)

program are being successfully implemented. The Coast Guard states that funding spent on the 110/123 patrol boat conversion program (\$96 million), the initial design effort for the FRC (\$33 million), and the initial portion of the VUAV effort (roughly \$115 million) together constitute only a small fraction of the total funding spent on various Deepwater acquisition programs, and that funding spent elsewhere in the program has achieved numerous results in terms of newly delivered capabilities.<sup>13</sup>

**GAO Perspective.** GAO has been assessing and making recommendations for Coast Guard management of Deepwater acquisition for several years. Recent GAO reports on the issue include those discussed below.

**June 2008 GAO Report.** Regarding overall management of Deepwater acquisition, GAO reported in June 2008 that:

Coast Guard leadership has increased accountability by bringing Deepwater under a restructured acquisition function and vesting its government project managers with management and oversight responsibilities formerly held by ICGS. However, like other federal agencies, it has faced challenges in building an adequate government workforce. A July 2007 reorganization of the acquisition function placed Deepwater, which had been insulated from other Coast Guard acquisitions, within a consolidated acquisition directorate, allowing the agency to operate in a more strategic fashion. The Coast Guard has also shifted the roles and responsibilities of key positions within this new acquisition structure. Formerly, ICGS had significant program management responsibilities, such as contractual responsibility for drafting task orders, including statements of work, and managing the system integration of Deepwater as a whole. Coast Guard project managers and technical experts now hold the greater balance of management responsibility and accountability for program outcomes. The Coast Guard, like other federal agencies, faces challenges in building a capable government workforce to manage this large acquisition. While it attempts to reduce vacancy rates, it is relying on support contractors in key positions such as cost estimation and analysis. The issue of support contractors in acquisition is not unique to the Coast Guard; we recently reported that the Department of Defense also relies heavily on contractors to perform roles in program management, cost estimation, and engineering and technical functions.

The Coast Guard's decision to manage Deepwater under an asset-based approach, rather than an overall system-of-systems, has resulted in increased government control and visibility over its acquisitions. Coast Guard officials are re-evaluating their long-term relationship with ICGS and have begun to hold competitions for Deepwater assets outside of that contract. Further, cost and schedule information is now captured at the individual asset level, which has resulted in improved visibility, such as the ability to track and report cost breaches for assets. Under the prior structure, a cost breach was to be tracked at the overall Deepwater program level, and the threshold was so high that a breach would have been triggered only by a catastrophic event. While the asset-based approach is beneficial, certain cross-cutting aspects of Deepwater — such as

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<sup>13</sup> Source for information in this paragraph and the preceding paragraph: Coast Guard briefing to CRS on the Deepwater program, April 28, 2008. For an overview of developments regarding Coast Guard management of Deepwater acquisition through mid-2008, see John C. Marcario, "Deepwater Gains," *Seapower*, August 2008: 16-18.



C4ISR and the overall numbers of each asset needed to meet requirements — still require a system-level approach. The Coast Guard is not fully positioned to manage these aspects; for example, it has not developed an acquisition strategy for C4ISR and lacks, at present, the ability to model the capabilities of planned and existing assets in a manner that informs decisions on the numbers of Deepwater assets needed. The Coast Guard maintains, however, that it must proceed with its acquisitions in the absence of this information.

Under the asset-based acquisition approach, the Coast Guard has begun to follow the disciplined project management framework of its Major Systems Acquisition Manual (MSAM), which requires documentation and approval of decisions at key points in a program's life cycle by designated officials at high levels. While the MSAM process is a significant improvement over the past approach, it has some shortcomings. For example, the process currently allows limited, or low-rate, initial production to proceed before the majority of design activities have been completed. As evidenced by our work on acquisition best practices, this situation could result in increased costs stemming from concurrent design and production. In addition, the approval process established by the MSAM is not being followed because DHS delegated review and approval of asset decisions to the Coast Guard. Further, the Coast Guard previously authorized a deviation from the requirement to follow the MSAM process for Deepwater as it was not thought to be compatible with the program's broad system-of-systems approach. Consequently, decisions to proceed with individual Deepwater projects were not based on specific criteria under a disciplined process, such as a determination as to whether the proposed asset would fulfill Coast Guard requirements. The consequences of not following a disciplined acquisition approach are clear now that Deepwater assets, such as the National Security Cutter (NSC), have been paid for and delivered without the Coast Guard's having determined whether the assets' planned capabilities would meet mission needs. The Coast Guard is now in the process of developing the documents and test plans it needs to do so.

The Coast Guard has developed new reporting systems designed to help project managers and decision makers affect project outcomes, but some key information is not reliable. Quarterly project reports compile cost and schedule information to summarize the status of each asset, and the "probability of project success" tool is intended to discern future outcomes through analysis of a multitude of different elements. However, Coast Guard officials currently lack enough detail into the earned value management data reported by the contractor. These data are used to assess progress on cost and schedule goals. In addition, the processes used by Northrop Grumman, one of the first-tier subcontractors, to generate earned value data may need to be re-certified to ensure the data's reliability. The resulting lack of confidence in the earned value data the Coast Guard currently receives will have an impact on decision making for future assets, as officials need to be informed of a contractor's past cost and schedule performance when evaluating proposed prices — such as prices for long-lead materials for and production of the fourth NSC. Officials state that they are addressing these issues through joint efforts with the Navy and the Defense Contract Management Agency (DCMA).

As the Coast Guard assumes greater control over the Deepwater Program, we are making recommendations to further strengthen its management and oversight. Specifically, we are recommending that the Secretary of Homeland Security improve DHS's oversight of the Deepwater Program by rescinding the

delegation of Deepwater acquisition authority. We are also recommending that the Commandant of the Coast Guard revise MSAM procedures to insert a formal design review before low-rate initial production can begin and that the Commandant develop an approach to increase visibility into Northrop Grumman's earned value management data before the Coast Guard enters into any additional contractual relationships with that contractor.<sup>14</sup>

The report also states:

In response to significant problems in achieving its intended outcomes under Deepwater, Coast Guard leadership has made a major change in course in its management and oversight of this program. Even with this change, the Coast Guard continues to face numerous risks of varying magnitude in moving forward with an acquisition program of this size. While the initiatives the Coast Guard has underway have already begun to have a positive impact on reducing these risks, the extent and durability of their impact depends on positive decisions that continue to increase and improve government management and oversight.

The current reliance on informal procedures to keep DHS informed of Deepwater developments is not appropriate for an acquisition of this magnitude. The Deepwater Program will continue for some time to come, and the full burden of transcending the inevitable challenges should not rest solely with the initiatives of the current Coast Guard leadership. The Coast Guard's major systems acquisition process requires DHS approval of milestone decisions; however, the 2003 DHS delegation to the Coast Guard of such approval means that DHS does not have formal approval authority, and it could lack the information needed to strategically allocate funding by balancing requirements and needed capabilities across departmental components. In addition, the Coast Guard's acquisition process calls for a decision to authorize initial production before knowledge is gathered about the stability of an asset's design and production processes, which is contrary to best practices and could result in cost increases and schedule delays because of redesign. And because the Coast Guard's knowledge of the reasonableness of contractors' proposed cost and schedule targets for Deepwater assets relies in part on visibility into and confidence in the contractors' earned value management data, the Coast Guard may lack a solid basis to evaluate future proposals by Northrop Grumman until known problems with its data are resolved.

To help ensure that the initiatives to improve Deepwater management and oversight continue as intended and to facilitate decision-making across the department, we recommend that the Secretary of Homeland Security direct the Under Secretary for Management to rescind the delegation of Deepwater acquisition decision authority.

We also recommend that the Commandant of the Coast Guard take the following two actions:

- To improve knowledge-based decision-making for its acquisitions, revise the procedures in the Major Systems Acquisition Manual related to the

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<sup>14</sup> Government Accountability Office, *Coast Guard[:] Change in Course Improves Deepwater Management and Oversight, but Outcome Still Uncertain*, GAO-08-745, June 2008, pp. 3-6.

authorization of low-rate initial production by requiring a formal design review to ensure that the design is stable as well as a review before authorizing initial production.

- To improve program management of surface assets contracted to Northrop Grumman Ship Systems, develop an approach to increase visibility into that contractor's earned value management data reporting before entering into any further contractual relationships, such as for long lead material for and production of the fourth NSC.

In written comments on a draft of this report, the Department of Homeland Security concurred with our findings. The department stated that it would take our recommendation on rescinding the delegation of Deepwater acquisition decision authority under advisement, but neither concurred nor disagreed with the recommendation. The Coast Guard concurred with our recommendation on requiring a formal design review before low-rate initial production, and plans to incorporate such a review in its next revision of the MSAM process. In addition, it partially concurred with our recommendation to improve program management of surface assets by developing an approach to increase visibility into Northrop Grumman's earned value management data. The Coast Guard stated that it agrees with the recommendation and is in the process of funding DCMA for surveillance of Northrop's earned value system and increasing the level of visibility into Northrop's data starting with the fourth NSC production contract. However, the Coast Guard stated that earned value data would provide limited utility for the fixed-price long lead materials contract for this acquisition and that obtaining the data would pose a significant cost and schedule impact. To determine a fair and reasonable price for the long lead and production contracts, the Coast Guard plans to obtain and review Northrop's certified cost and pricing data. It appears to us that the Coast Guard has developed an approach for increasing visibility into the earned value management data for future contracts with Northrop Grumman. We believe this approach, if implemented as planned, will address our recommendation.<sup>15</sup>

**March 2008 GAO Report.** GAO reported in March 2008 that:

The Coast Guard has changed how decisions are made about purchasing Deepwater assets. It is moving from a "system-of-systems" acquisition model — with the contractor, ICGS, as the system integrator — to a more traditional acquisition strategy in which the Coast Guard will take a more direct role and manage the acquisition of each asset separately....

We have closed two of the five open recommendations from our previous report, pertaining to the Coast Guard's use of models and metrics to measure the contractor's progress toward improving operational effectiveness and establishing criteria for when to adjust the total ownership cost baseline. The Coast Guard has taken actions on the three recommendations that remain open, such as designating Coast Guard officials as the lead on integrated product teams, developing a draft maintenance and logistics plan for the Deepwater assets, and potentially eliminating the award term provision from the ICGS

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<sup>15</sup> Ibid., pp. 29-31.

contract. However, at this time, the actions are not sufficient to allow us to close them.<sup>16</sup>

The same GAO report also stated:

The Coast Guard is moving away from the ICGS contract and the system-of-systems model, with the contractor as system integrator, to a more traditional acquisition strategy, where the Coast Guard will manage the acquisition of each asset separately. In a series of reports since 2001, we have noted the risks inherent in the systems integrator approach to the Deepwater program and have made a number of recommendations intended to improve the Coast Guard's management and oversight. We specifically focused on the need to improve program management, contractor accountability, and cost control. We, as well as the DHS Inspector General and others, have also noted problems in specific acquisition efforts, notably the National Security Cutter (NSC) and the 110-Foot Patrol Boat Modernization, which was permanently halted due to operational and safety concerns.

The Coast Guard has recognized that it needs to increase government oversight and has begun to transfer system integration and program management responsibilities back to the Coast Guard. It has begun taking formal steps to reclaim authority over decision making and to more closely monitor program outcomes.

The Coast Guard has also

- begun to competitively purchase one asset (the Fast Response Cutter-B) and plans to competitively purchase other assets outside of the ICGS contract;
- expanded the role of third parties, including the U.S. Navy, to perform independent cost assessments and program technical analyses; and
- reorganized and consolidated the acquisition function to strengthen its ability to manage projects.

Additionally, because the IDIQ contract minimum was met during the 5-year base term, the government is under no further obligation to use the contract. Coast Guard officials said that they are currently evaluating whether to continue to use the ICGS contract for efforts that are already under way, such as the NSC, versus contracting directly with the subcontractors. Further, they may continue to use the ICGS contract for certain efforts, such as logistics.<sup>17</sup>

Regarding a GAO recommendation to take steps to make integrated product teams (IPTs) effective, the same GAO report states:

*Current Status: Partially Implemented*

The Coast Guard is in the process of restructuring the IPTs, which remain a key program management tool. Coast Guard program managers, rather than ICGS representatives, now chair the IPTs. The IPTs' current role is to discuss options for problem solving related to cost, schedule, and performance

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<sup>16</sup> Government Accountability Office, *Status of Selected Aspects of the Coast Guard's Deepwater Program*, GAO-08-270R, March 11, 2008, pp. 2-3.

<sup>17</sup> *Ibid*, Objective #1 (page 2).

objectives, but the program manager is ultimately responsible for making decisions. In addition to evaluating and rechartering some existing IPTs, the Coast Guard has organized two new ones and is in the process of establishing several others.

Since the Coast Guard will now chair IPTs, the chartering of sub-IPTs to clarify roles and responsibilities is no longer an issue. Coast Guard officials plan to use working groups established under the authority of the IPTs to address specific issues. Working groups are more informal and can come together and disband on an as-needed basis.

Finally, the electronic information system, built and managed by ICGS, is still used as a tool used to share information among geographically dispersed IPT members — specifically, ICGS and the Coast Guard. However, with the decreasing reliance on ICGS as the system integrator, this particular contractor-led electronic information-sharing system may become less integral to effective management of the Deepwater program.

Due to the ongoing chartering, restructuring, and re-evaluation of the roles and responsibilities of the IPTs within the new construct of the Deepwater program, this recommendation remains open as partially implemented.<sup>18</sup>

Regarding a GAO recommendation to provide information on maintenance and logistics responsibilities, the same GAO report stated:

*Current Status: Partially Implemented*

In June 2007, we reported that the Coast Guard announced it was assuming the role of the default provider of maintenance and logistics, supplemented by contractors as necessary. The Coast Guard is still formalizing its assumption of maintenance and logistics responsibilities. The Coast Guard technical authority is developing a commandant instruction that outlines policies, processes, roles, and responsibilities for maintenance and logistics support for Deepwater assets. The Coast Guard plans for Deepwater assets to follow the same maintenance program — already familiar to Coast Guard maintenance personnel — as its other assets. However, the Coast Guard expects that some areas, such as command, control, communications, and computer electronics, will require contractor support until Coast Guard personnel can be trained or new personnel can be hired to fill these roles.

Because the Coast Guard has not yet issued the final commandant instruction that assigns maintenance and logistics responsibilities to Coast Guard personnel instead of ICGS, we are leaving this recommendation open as partially implemented. Once the instruction that addresses our recommendation is issued, we plan to close this recommendation as implemented.<sup>19</sup>

Regarding a GAO recommendation to hold the system integrator accountable for competition among subcontractors in make-or-buy decisions for the Deepwater program, the same GAO report stated:

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<sup>18</sup> Ibid, Objective #4 (page 8).

<sup>19</sup> Ibid, Objective #3 (page 9).

*Current Status: Partially Implemented*

The Coast Guard has taken steps to increase its insight into make-or-buy decisions for Deepwater assets under the ICGS contract. In 2005, the Coast Guard asked ICGS to notify the government of make-or-buy decisions of \$10 million or more. However, in December 2006, the Coast Guard reported that contractor data were inadequate to determine the level of competition achieved. Subsequently, the June 2007 award term modification incorporated a formal requirement for reporting make-or-buy decisions. ICGS must submit a make-or-buy plan that outlines rationale and justification for each DTO proposal that contains work items or work efforts priced at more than \$5 million and/or that would typically require company management review because of complexity, cost, need for large quantities, or requirement for additional production facilities. The rationale should consider overall benefit to the government, including:

- (1) long-term and/or near-term cost benefit;
  - (2) adequacy of considerations made in the make-or-buy determination;
  - (3) impacts on product performance;
  - (4) present and future supportability, maintenance and/or upgrade potential;
- and
- (5) proprietary data or other restrictions that could limit pursuit of future cost-effective alternatives.

The Coast Guard is putting less emphasis on the subcontractor competition issue due to the move away from using the ICGS contract and more toward full and open competition. In fact, Coast Guard officials told us that because of potential legislation that would prohibit them from using ICGS as the system integrator, they are considering eliminating award term provisions from the contract.

In addition, the Coast Guard no longer uses award fees under the ICGS contract. However, it has incorporated an incentive fee for the NSC.

We are leaving this recommendation open as partially implemented pending Coast Guard documentation regarding the award term provision.<sup>20</sup>

GAO also commented at length on the Coast Guard's management of the Deepwater program in March 5, 2008, testimony before the Homeland Security subcommittee of the House Appropriations Committee,<sup>21</sup> and March 6, 2008 testimony before the Oceans, Atmosphere, Fisheries, and Coast Guard subcommittee of the Senate Commerce, Science, and Transportation Committee.<sup>22</sup>

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<sup>20</sup> Ibid, Objective #4 (page 12).

<sup>21</sup> Government Accountability Office, *Testimony Before the Subcommittee on Homeland Security, Committee on Appropriations, House of Representatives, [on] Coast Guard[:] Deepwater Program Management Initiatives and Key Homeland Security Missions, Statement of John P. Hutton, Director Acquisition and Sourcing Management and Stephen L. Caldwell, Director Homeland Security and Justice*, GAO-08-531T.

<sup>22</sup> Government Accountability office, *Testimony Before the Subcommittee on Oceans, Atmosphere, Fisheries, and Coast Guard, Committee on Commerce, Science, and Transportation, U.S. Senate, [on] Coast Guard[:] Observations on the Fiscal Year 2009* (continued...)

## National Security Cutter (NSC)

**In General.** On August 8, 2007, the Coast Guard announced that it had reached agreement with ICGS to settle design and contractual issues regarding the first three National Security Cutters.<sup>23</sup> An August 13, 2007, press report provided additional information on the settlement.<sup>24</sup> Changes to the NSC's design intended to improve the ship's estimated fatigue life will be backfitted onto the first two NSCs and incorporated into the original construction of the third and subsequent NSCs. The Coast Guard states:

Not atypically for a first-in-class ship, during the Coast Guard's review of the NSC's design from 2002 to 2004, concerns were raised about certain aspects of the ship's structure that could prevent it from achieving its required 30-year service life. Specifically, Coast Guard and independent technical experts questioned whether some of the cutter's structural components would experience fatigue damage prior to the service-life objective, a critical consideration given the extended, high-tempo operations expected of the NSC. After thorough review, the Coast Guard determined that it is in the U.S. Government's interest to increase the fatigue tolerance of the NSC to ensure that the ship's basic structures will meet its projected 30-year service life. Engineering changes to address the desired structural enhancements were developed in collaboration with the U.S. Navy and other naval engineering experts for approval by the Deepwater Program's technical authority, the Engineering and Logistics Directorate at U.S. Coast Guard Headquarters in Washington, D.C.

In the end, Coast Guard officials say, the NSC will be designed to achieve a 30-year fatigue life and built to deliver 21st Century capabilities to the Coast Guard in a way that will enhance the safety of its crew and allow the Coast Guard to execute its central missions more effectively, efficiently, and safely.<sup>25</sup>

The Coast Guard conducted preliminary acceptance (i.e., delivery) of the first NSC (named *Bertholf*) on May 8, 2008. The Coast Guard's press release on the event stated in part:

Today's delivery is a major milestone in BERTHOLF's transition to full operational status in the Coast Guard's fleet and represents preliminary acceptance of the cutter, as documented in the Material Inspection and Receiving Report (DD250). The DD250 formally documents inspection, delivery by the

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<sup>22</sup> (...continued)

Budget, Recent Performance, and Related Challenges Statement of Stephen L. Caldwell, Director Homeland Security and Justice Issues, GAO-08-494T.

<sup>23</sup> Coast Guard Press Release, August 8, 2007, entitled "Coast Guard Awards Contract For Third National Security Cutter," accessed on August 23, 2007, at [<https://www.piersystem.com/go/doc/786/167626/>]

<sup>24</sup> Christopher P. Cavas, "USCG, Contractors Agree on New Cutters," *Defense News*, August 13, 2007.

<sup>25</sup> Source: Coast Guard discussion of NSC program on the Internet at [<http://www.uscg.mil/acquisition/nsc/projectdescription.asp>].

ship builder, and receipt by the government This marks first major multi-mission cutter to be built and delivered to the Coast Guard in more than 20 years.

Following recommendations from the cutter's prospective commanding officer, Coast Guard technical authorities, the operational community, and acquisition professionals, the Coast Guard Agency Acquisition Executive, Vice Adm. Vivien Crea, gave the go-ahead for preliminary acceptance of BERTHOLF....

Today's preliminary acceptance allows the Coast Guard's crew to move aboard BERTHOLF and place the cutter "In Commission Special" status. This status indicates that the vessel is entering a post-delivery period of approximately 22-24 months during which it will undergo crew training, operational evaluation and certification, and Post Delivery and Post Shakedown availabilities to ensure it meets all performance and operational requirements....

During the recently completed Acceptance Trials of BERTHOLF, the U.S. Navy's Board of Inspection and Survey (INSURV) designated eight "starred" trial cards as a subset of the approximately 2,800 cards it identified. The government uses trial cards to document technical and performance discrepancies that require correction before the ship becomes operational. The INSURV Board recommended that the Coast Guard accept the BERTHOLF after appropriately addressing the eight starred cards. The Coast Guard has overseen the successful resolution of two starred cards. The remaining starred cards will continue to be addressed by the Coast Guard, with some pending final at-sea testing. Those cards, along with all other outstanding trial cards, are listed as exceptions on the DD250 and will be closely tracked until they are completely resolved.

In addition to addressing those trial cards, the Coast Guard continues its information assurance work to achieve certification of all information technology systems onboard BERTHOLF. Those efforts include TEMPEST (Information Assurance) testing and software scans by the U.S. Navy's Space and Naval Warfare Systems Command (SPAWAR). Work will continue to ensure that all systems receive proper certification prior to the cutter's first operational deployment. Anticipating that some installed classified communications systems may not be certified and accredited prior to a mid-June "sail-away" date, temporary "stand-alone" systems, as necessary, will be made available to the ship for the voyage to homeport. No classified communications will occur over any system that has not met stringent Information Assurance standards (including TEMPEST certification).

In approximately one year, and following successful completion of these efforts, resolution of all trial cards and contract liens, and completion of the warranty period, the Coast Guard will execute final acceptance of the cutter.<sup>26</sup>

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<sup>26</sup> Coast Guard press release dated May 8, 2008, entitled "First National Security Cutter Delivered to Coast Guard," available online at [<http://www.piersystem.com/go/doc/786/201676/>]. See also the additional Coast Guard information on the ship's preliminary acceptance posted online at [[http://www.uscg.mil/acquisition/newsroom/pdf/30\\_May\\_AT\\_whitepaper\\_starred\\_cards\\_update\\_hck.pdf](http://www.uscg.mil/acquisition/newsroom/pdf/30_May_AT_whitepaper_starred_cards_update_hck.pdf)], [<http://www.uscg.mil/acquisition/newsroom/pdf/nscacceptancecongressionalbrief.pdf>], and [<http://www.piersystem.com/go/doc/786/199176/>]. See also: Rebekah Gordon, "Coast Guard Accepts Delivery of First (continued...)



As mentioned earlier, the first NSC was commissioned into service on August 4, 2008. The Coast Guard stated on that date that “as is common for any new U.S. Navy or Coast Guard ship, CGC [Coast Guard cutter] BERTHOLF will have several underway and in-port periods over the next 22 to 24 months for final outfitting and to test the cutter’s engineering, electronic, and combat systems, preparing the cutter for world-wide deployment.”<sup>27</sup>

**October 2008 Press Report on NSC Construction Costs.** An October 7, 2008, press report stated:

Increasing commodity and labor costs coupled to a lesser extent with the weak dollar relative to the euro are likely to send construction costs much higher than expected for the fourth National Security Cutter (NSC) the Coast Guard has warned Congress.

President Bush last week signed into law the FY ‘09 Homeland Security Act, which includes \$353.7 million the Coast Guard wanted for the fourth NSC. The construction bid on the 418-foot vessel is due in January 2009 from Northrop Grumman [NOC] and the Coast Guard has no way of knowing exactly what price will be, Rear Adm. Gary Blore, the service’s acquisition chief, told *Defense Daily* on Friday.

“But, again, I can see the pressures to raise the cost on that proposal when it comes into the government, which is what we are trying to alert the [Capitol] Hill too,” Blore said.

The construction cost for the third NSC is \$330 million and for the second vessel was \$324 million. The construction cost for the first cutter was \$502 million, but that included non-recurring engineering costs, Blore pointed out.

In approving the funding request for the fourth NSC, congressional appropriators cautioned that “it is questionable whether this amount will be sufficient to purchase the fourth NSC,” according to recent information provided by the Coast Guard. In an explanatory statement accompanying FY ‘09 funding, the appropriators require the Coast Guard within 30 days from the time President Bush signs the bill into law to provide “detailed information on all reasons why there may be a nearly 50 percent increase in the cost of this cutter and how it plans to manage this procurement within the dollars provided.”

Blore said that the Coast Guard put in its budget request for the fourth NSC in the summer of 2007 and the White House Office of Management and Budget locked down the final figure in December of that year prior to the February 2008 submission to Congress for the FY ‘09 federal budget. At that time, it was difficult to foresee the continued spike in commodity costs such as nickel, copper, aluminum and steel, and also hard to judge the escalating labor rates in

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<sup>26</sup> (...continued)

National Security Cutter,” Inside the Navy, May 12, 2008.

<sup>27</sup> U.S. Coast Guard, “Acquisition Update: National Security Cutter Bertholf (WMSL 750) Commissioned,” accessed online on October 7, 2008, at [<http://www.uscg.mil/acquisition/newsroom/updates/nsc080408.asp>]

the Gulf Coast region, which continues to recover from Hurricane Katrina, he said.

The reason the weak dollar impacts the shipbuilding costs is because about 8 percent of the NSC's contents are manufactured in Europe, Blore said.

If Northrop Grumman's proposed construction cost for the fourth NSC comes in higher than the \$353.7 million budget, Blore said he would either have to reprogram funds or possibly wait for additional appropriations in FY '10. This will depend on the size of the proposal, he said....

The total cost for the first NSC, which was delivered to the Coast Guard in May and is currently going through operational tests, is estimated to be about \$640 million, Blore said. That total includes the construction contract cost, long-lead materials, program management, test and evaluation, and more, he said.

The Coast Guard estimates that the total cost for the fourth vessel will be around \$740 million, Blore said. The contract award for the fourth vessel will likely be made in late 2009 or early 2010, he said.<sup>28</sup>

**Electronics/C4ISR Systems.** In February and March 2008, press reports stated that there were problems with the electronic systems on the first NSC, and that the ship's entry into service might consequently be delayed.<sup>29</sup> Coast Guard officials questioned the accuracy of facts reported in some of the news accounts, and expressed confidence that the ship would be delivered without further delay.<sup>30</sup>

The first NSC's C4ISR systems, including its information assurance [IA] capability — the ability of its various electronic systems to protect classified data — were again discussed in press reports in early-May 2008. One such report stated:

The InSurv report provides one of the most detailed looks yet at the state of the \$641 million Bertholf, the first in a class of eight ships that are to take over for the Coast Guard's current fleet of a dozen 40-year-old Hamilton-class high-endurance cutters.

"In general, builder fit, finish and cleanliness on the main deck and above were very good and in many areas met or exceeded new construction trial

<sup>28</sup> Calvin Biesecker and Emelie Rutherford, "Coast Guard Expects Construction Costs For Fourth NSC To Rise Sharply," *Defense Daily*, October 7, 2008. See also John C. Marcario, "After Bertholf," *Seapower*, August 2008: 20-21.

<sup>29</sup> Philip Ewing, "C4ISR Problems Could Delay Cutter Construction," *NavyTimes.com*, February 27, 2008; Geoff Fein, "Coast Guard Working To Assure Information Won't Leak From Bertholf," *Defense Daily*, March 6, 2008; David Axe, "Coast Guard Delays Cutter Over Radios," *Washington Times*, March 11, 2008; Dan Caterinicchia, "Coast Guard Delays First Ships for New Fleet," *Washington Post*, March 12, 2008: D3.

<sup>30</sup> Philip Ewing, "CG: Contrary to Report, No Delay for Bertholf," *NavyTimes.com*, March 11, 2008; Bettina H. Chavanne, "USCG Confident About NSC; GAO Less So," *Aerospace Daily & Defense Report*, March 14, 2008: 3; Zachary M. Peterson, "Coast Guard Admirals Confident NSC Will Be Delivered By End of May," *Inside the Navy*, March 17, 2008; John M. Doyle, "Coast Guard To Deploy New Cutter in 2010," *Aviation Week*, April 11, 2008.

expectations,” the report said, although the ship was not as squared-away below decks. And the InSurv said that 1,360 trial cards were carried over from previous machinery trials, “a testament to the superb quality assurance oversight provided during ship construction and testing by the USCG project manager’s representative office and the Navy supervisor of shipbuilding.”

But one key detail went unresolved — an assessment of the Bertholf’s command, control, communications, computers, intelligence, surveillance and reconnaissance suite, commonly known as C4ISR. Much of the information systems gear was not yet installed when InSurv came onboard, according to the report, nor did Navy inspectors conduct full tests on the ship’s radios, although overall the communications section of the InSurv gave the highest grade, “satisfactory.”

Coast Guard systems officials said in a March blog post that “issues” with the Bertholf’s C4ISR information security posed “some risk” of a delay in the ship’s delivery schedule, although Coast Guard and industry officials have continued to insist that the ship is adhering to its revised timetable.<sup>31</sup>

Another early-May 2008 press report stated that:

The U.S. Coast Guard may still face issues with communications systems aboard its new National Security Cutter (NSC) if it tinkers with precertified command, control and communications systems after it accepts the ship.

An Inspection and Survery (Insurv) report issued recently gave a 98 percent rating to the communications system aboard the new NSC, the Bertholf. The U.S. Navy, which runs the Insurv, determined the Lockheed Martin-built communications suite was ready for acceptance.

However, additional communications and control equipment to be installed after the ship is accepted has the potential to conflict with the work Lockheed Martin has already performed, the company says. “We want to help the Coast Guard avoid any potential impacts to system performance or our ability to provide support under warranty as they integrate additional systems following acceptance,” Lockheed Martin Coast Guard Systems technical director Jack Ryan told Aerospace DAILY in a May 6 e-mail.

Coast Guard spokesperson Laura Williams said, “There’s no difference after we accept the ship. We do have a warranty period.” Whatever work is not complete up until the Cost Guard accepts the ship will be listed on a certification documents known as DD 250, which is anticipated later this week, according to Williams.

The Coast Guard will continue to “ensure all work will receive the proper certification by deployment,” Williams added. “To my knowledge, [Coast Guard] work will not void the warranties.”

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<sup>31</sup> Philip Ewing, “National Security Cutter ‘Capable,’ InSurv Finds,” NavyTimes.com, May 1, 2008. See also Michael DeKort, “National Security Cutter Blunder?,” May 2, 2008, available online at [<http://equalcivilrights.blogspot.com/2008/05/national-security-cutter-blunder.html>]

But when the Coast Guard begins integrating additional communications components on the Bertholf, the concern is whether there will be an impact on existing equipment, and whether work performed by the Coast Guard will affect Lockheed Martin's ability to provide maintenance and service. Rayan said Lockheed will transition to a "support role" after the ship is accepted. "We are happy to provide support if asked, but we are not currently involved with any additional system installations planned after acceptance of the ship."<sup>32</sup>

In late-May 2008, it was reported that:

The Coast Guard's new national security cutter, the Bertholf, is steadily whittling down its number of outstanding technical problems now that its crew has moved aboard and the ship is taking regular trips to sea, senior Coast Guard officials said Tuesday.

Rear Adm. Gary Blore, the service's head of acquisitions, said in a conference call with reporters that the presence of the crew onboard had enabled Coast Guardsman and shipyard engineers to resolve five of the eight systems "starred" in an April report by the Navy Board of Inspection and Survey. By the time the cutter sails from its Gulf Coast shipyard in mid-June, Blore expected all eight problems to be resolved....

A Navy inspection identified 2,816 points, noted as "trial cards," plus the eight "starred" systems, that were incomplete or needed work aboard the 418-foot, \$641 million Bertholf. Those points were carried over May 8 when the Coast Guard signed the paperwork to accept the ship in a "special commission" status, prompting a few members of Congress to criticize the Coast Guard for taking ownership of what critics fear is at best an unfinished ship, and at worst a lemon.

Still, officials said Tuesday the cutter has used its first-of-its-kind stern ramp about 60 times to launch the new small boats it carries — the Long Range Interceptor and the Short-Range Prosecutor — and that its flight deck is ready to accept the first landings by Coast Guard helicopters.

Top Coast Guardsmen also said they were confident that work was progressing on the Bertholf's command and communications gear, known by the acronym C4ISR, which had generated about 650 trial cards in its first inspection in June 2007. By the time of the most recent inspection, when a team from the Navy's Space and Warfare Command came aboard in April, there were 122 remaining C4ISR trial cards, officials said.

The ship is to undergo its next major C4ISR inspection in the middle of August, Blore said, when it arrives in its new homeport of Alameda, Calif.<sup>33</sup>

On the issue of the first NSC's information assurance capability, the Coast Guard states:

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<sup>32</sup> Bettina H. Chavanne, "USCG May Still Face Comms Issues After Accepting NSC Bertholf," *Aerospace Daily & Defense Report*, May 8, 2008: 3.

<sup>33</sup> Philip Ewing, "CG: Work On Bertholf Proceeding Apace," *NavyTimes.com*, May 28, 2008.

Before the BERTHOLF [the first NSC] becomes part of the Coast Guard's fleet it must go through a standardized Information Assurance (IA) process based on Federal and Department of Defense (DOD) policies, wherein delivered equipment and installation procedures are certified for compliance by the Coast Guard.

The Coast Guard's C4&IT Technical Authority, CG-6, anticipates that BERTHOLF will initially be granted a limited authority to operate some of its systems to facilitate the vessel's transit to its new homeport in Alameda, CA. In fact, an ATO [Authority to Operate] was granted on 30 April 2008 for a stand-alone classified messaging system; and on 09 May 2008, an Interim Authority to Operate (IATO) was approved for limited network connectivity of the unclassified local area network and general support system. No classified information is permitted to be loaded on any IT system until certification and accreditation is completed and approved by the Coast Guard's Designated Accrediting Authority (DAA)....

The IA process includes a large number of activities, one of which is known as TEMPEST testing. TEMPEST testing is comprised of visual and instrumented inspections to ensure compliance with emission security requirements....

The Coast Guard adheres closely to the Department of Homeland Security, Department of Defense and the National Security Agency rules, regulations, and protocols for TEMPEST testing and certification. As stated previously, no classified information is permitted to be loaded on any system that does not meet these stringent requirements....

The Coast Guard recognized early-on that since the BERTHOLF was "first in class," close attention needed to be paid to IA, since the contract emphasized commercial equipment and software use where possible. To mitigate this risk, the Coast Guard began testing and evaluating the systems as early as possible, often before installations were complete. This effort provided excellent data to the Coast Guard and contractor for focusing efforts. This preliminary testing revealed several areas within the BERTHOLF's C4ISR suite that required attention.

To date, the testing regimen has included the following informal and formal tests:

— Mini Instrumented TEMPEST Survey: May 31-June 3, 2007 — Various discrepancies were noted to the contractor for corrective actions.

— Visual TEMPEST Inspection: July 2007 — The inspection generated approximately 650 trial cards. These cards were given to the contractor for corrective actions.

— Mini Instrumented TEMPEST Survey: January 11-14, 2008 — During this inspection, issues were identified and discrepancies were noted to the contractor for corrective actions.

— Mini Instrumented TEMPEST Survey of the NSC mock-up at Coast Guard Training Center Petaluma: February 25-29, 2008 — During this inspection, issues were identified and discrepancies were noted to the contractor for corrective actions.

— A formal Visual TEMPEST Inspection and partial Instrumented Test Survey performed by USN SPAWAR was conducted in April 2008. The formal visual TEMPEST inspection revealed significant progress toward TEMPEST compliance, in that only 122 visual discrepancies remained from the original 650 trial cards. Due to time constraints resulting from ongoing shipyard work and other Information Assurance activities conducted by SPAWAR (software scans), the full Instrumented Test Survey is not yet complete. The full ITS will be completed following BERTHOLF's arrival to her new homeport in Alameda, CA. All outstanding discrepancies are documented on the DD250. The remaining TEMPEST discrepancies will be corrected prior to final certification and accreditation. The instrumented TEMPEST survey results are CLASSIFIED.

In April 2008, the Navy Board of Inspection and Survey (INSURV) inspectors verbally commented that the internal C4ISR cabling and wiring installation was of high quality. While there are some discrepancies, the C4ISR equipment functioned as designed for four separate underway trials. BERTHOLF's C4ISR equipment configuration has remained unchanged throughout all trials and during TEMPEST testing. New capability is scheduled to be added during post shakedown availability after final acceptance. Additional equipment and improvements will be incorporated as necessary (test-fix-retest methodology) to ensure systems are adequately shielded, bonded, and/or separated to eliminate any compromising emanations. The Coast Guard, over the coming months, will work with SPAWAR to improve the Information Assurance posture of BERTHOLF until all systems are certified and accredited.<sup>34</sup>

### **GAO Perspective.**

**June 2008 GAO Report.** In June 2008, GAO reported the following regarding the status of the NSC program:

The NSC's projected costs have increased greatly compared to the initial baseline. Requirements changes to address post-9/11 needs are one of the main reasons for the cost increases. Hurricane Katrina was another contributing factor, but Coast Guard actions also contributed to the increases, such as the decision to proceed with production before resolving fatigue life concerns. Fatigue is physical weakening because of age, stress, or vibration. A U.S. Navy analysis done for the Coast Guard determined that the ship's design was unlikely to meet fatigue life expectations. The Coast Guard ultimately decided to correct the structural deficiencies for the first two National Security Cutters at scheduled points after construction is completed to avoid stopping the production lines, and to incorporate structural enhancements into the design and production for future ships. In August 2007, the Coast Guard and ICGS agreed to a consolidated contracting action to resolve the contractor's request for equitable adjustment of \$300 million, stemming from ICGS's contention that the Coast Guard had deviated from a very detailed contractor implementation plan on which pricing was based. This negotiation also converted the second NSC from a fixed-price to a cost plus incentive fee contract.

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<sup>34</sup> Coast Guard fact sheet on information assurance, available online at [[http://www.uscg.mil/acquisition/newsroom/pdf/12MAY08\\_NSC\\_IA\\_Fact\\_Sheet\\_CG93\\_final.pdf](http://www.uscg.mil/acquisition/newsroom/pdf/12MAY08_NSC_IA_Fact_Sheet_CG93_final.pdf)].

A Coast Guard official stated that the first NSC is nearing completion with more than 98 percent of the ship constructed and machinery, builders, and acceptance trials have been completed. Delivery of the ship to the Coast Guard occurred on May 8, 2008; however, the contractor is still in the process of submitting certifications and resolving issues found in testing including these with the propulsion system and communications equipment. A Coast Guard official stated that the second NSC is 50 percent complete and long lead materials and production contracts have been awarded for the third ship. The Coast Guard plans to award the production contract for the fourth NSC in fiscal year 2009, with a contract for long lead materials for that ship planned for the summer of 2008.

A Coast Guard official stated that some issues with the first NSC will remain at delivery, including issues with classified communications systems. Officials told us that they are in the process of determining how to most cost effectively address these issues. ICGS will continue to perform work on the first NSC after it leaves the shipyard, including certain repairs that fall under the ship's warranty.<sup>35</sup>

**March 2008 GAO Report.** In March 2008, GAO reported the following regarding the status of the NSC program:

Changes to the NSC have had cost, schedule, and performance ramifications.

The estimated costs for the first three ships have generally doubled from the initial projected costs due to a number of contributing factors, including requirements changes as a result of September 11, Hurricane Katrina damages, and some program management actions by the Coast Guard.

Delivery of the ship could be delayed. An aggressive trial schedule leaves little time for dealing with the unexpected, and most certifications have yet to be completed.

Coast Guard officials expect the ship to meet all performance parameters, but will not know for certain until the ship undergoes trials. Further, Coast Guard engineers have concerns that most of the ship's available weight margin has been consumed during construction, meaning that subsequent changes to the ship will require additional redesign and engineering to offset the additional weight.<sup>36</sup>

The GAO report also stated:

The NSC's projected costs have increased compared to the initial baseline, as shown in [GAO Report] Table [No.] 1.

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<sup>35</sup> Government Accountability Office, *Coast Guard[:] Change in Course Improves Deepwater Management and Oversight, but Outcome Still Uncertain*, GAO-08-745, June 2008, p. 36.

<sup>36</sup> Government Accountability Office, *Status of Selected Aspects of the Coast Guard's Deepwater Program*, GAO-08-270R, March 11, 2008, pp. 2-3.

**[GAO Report] Table [No.] 1: Cost Growth for NSC 1 - 3 (Dollars in millions)**

	NSC 1	NSC 2	NSC 3
Design	\$67.7	—	—
Build	264.4	\$200.7	\$189.2
Govt. Furnished equipment (GFE)	52.8	50.0	40.0
<b>Initial projected costs (2002)</b>	<b>\$384.9</b>	<b>\$250.7</b>	<b>\$229.2</b>
Requirements changes	75.9	60.0	60.0
Hurricane Katrina	40.0	44.4	38.7
Economic changes	58.3	69.9	86.8
Structural enhancements	40.0	30.0	16.0
Other GFE	41.5	40.7	73.9
<b>Current projected costs (2008)</b>	<b>\$640.7</b>	<b>\$495.7</b>	<b>\$504.6</b>

Source: Coast Guard.

Note: Economic changes include, for example, escalation of material/labor and some costs associated with settling the REA. Other GFE includes certifications, tests, and training. For NSC 3, other GFE also includes additional government oversight.

Requirements changes to address post-9/11 needs are one of the main reasons for the cost increases. The new requirements include

- expanded interoperability with the Department of Defense, DHS, and local first responders;
- increased self-defense and survivability, including chemical, biological, and radiological measures;
- increased flight capability via longer and enhanced flight deck;
- upgraded weapon systems; and
- improved classified communication capabilities.

Another contributing factor was Hurricane Katrina, which not only caused considerable damage to the shipyard, including tooling, equipment, shops, and other facilities, but also caused an exodus of the experienced workforce. The overall number of shipworkers declined significantly, causing the contractor to use more overtime hours. The loss of workers, in turn, considerably disrupted the ship's learning curve, which normally results in greater efficiencies in production of subsequent ships.

However, some of the increase can be attributed to Coast Guard actions. For example, the contractor used the Coast Guard's failure to precisely execute the contract according to the implementation plan as basis for requesting an equitable adjustment. Furthermore, even though the Coast Guard's own technical staff raised fatigue life concerns — later confirmed by a U.S. Navy study — during the design phase, the decision was made to proceed with production of the first two NSCs and enhance the structure later.<sup>37</sup>

With regard to the delivery schedule for NSC-1, the same GAO report stated:

The first NSC was initially projected for delivery in 2006, but slipped to August 2007 after the 9/11 requirements changes. However, delivery was again

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<sup>37</sup> Ibid, Objective #3 (page 4).



delayed until April 2008. It is uncertain at this time whether the new delivery date will be met due to several factors involving testing, certifications, and other areas of technical risk.

Machinery trials occurred in early December and builder's trials occurred February 8 - 11, 2008. The current schedule leaves little margin for delay. Acceptance trials are scheduled to begin April 7, 2008. The contract requires 30 days between acceptance trials and ship delivery, but the scheduled dates for these events are about 3 weeks apart. The Coast Guard and the contractor are aware of the discrepancy; however, no decision has been made on how to resolve this issue. The Coast Guard will have to either extend the delivery date of the ship to meet the requirement or waive it. Our prior work has shown that event-driven rather than schedule-driven decisions are preferable, thus it may be in the best interest of the Coast Guard to delay acceptance of the first NSC until a number of these issues are resolved.

Of the 987 certification standards, ICGS was to submit documentation on 892 for review and acceptance by the Coast Guard Technical Authority. Almost all remain outstanding. In addition, the Coast Guard and contractor differed in their understanding of the number of certifications for which ABS was responsible. Northrop Grumman had contracted with ABS to certify 60 standards; however, the Coast Guard believed ABS was responsible for 84. According to Coast Guard officials, the issue has been resolved and ABS will now be responsible for 86 certifications. Further, for NSC 3 and later ships, ABS will be responsible for about 200 certifications. Other third parties will certify 11 of the standards.

The Coast Guard has identified 13 issues pertaining to C4ISR and Hull, Mechanical, and Electrical as risk areas, 8 of which have moderate to high risk of occurrence or impact if not resolved. One of these relates to the results of the July 2007 visual TEMPEST inspection, conducted by a team of Coast Guard officials. The team reported hundreds of discrepancies, over 40 percent of which pertain to cable grounding and separation, such as cables intended for classified information not being adequately separated from those intended for nonclassified information. Coast Guard officials told us that they requested the test be done earlier than usual so that issues could be identified and corrected sooner.

Coast Guard and Navy personnel noted that having open issues with a ship — particularly for the first in class — at the time of delivery is normal. After acceptance, the Coast Guard plans to conduct operational testing at sea for approximately 2 years, during which time open issues can be resolved. The ship will officially become operational thereafter, which, based on the current schedule, will be March 2010.<sup>38</sup>

With regard to performance parameters for the NSC, the same GAO report stated:

Key performance parameters for the NSC were first defined in the Acquisition Program Baseline submitted for DHS approval in November 2006. Coast Guard officials explained that the key performance parameters were

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<sup>38</sup> Ibid, Objective #3 (page 5).

derived from performance specification requirements that had been in place before contract award....

The key performance parameters have not been changed due to post-9/11 mission requirements. Coast Guard officials expect the NSC to meet the current threshold parameters, but they will not know for certain until the ship undergoes sea trials.

However, the Coast Guard's Engineering Logistics Center officials expressed concern about the ship's weight margin. Ship designs typically include a margin for additional weight to accommodate service enhancements during the ship's service life. The officials noted that most of the available weight margin has already been consumed during construction — not including the fatigue life structural enhancements. The officials further noted that subsequent changes to the ship will cost more than they would have otherwise due to additional redesign and engineering that may be necessary to offset the additional weight. Coast Guard officials noted, however, that a mitigation strategy is in place and adjustments are being made that will increase the service life weight margin.<sup>39</sup>

## 110-Foot Patrol Boat Modernization

On May 17, 2007, the Coast Guard issued a letter to ICGS revoking its previous acceptance of the eight converted boats — an action intended to facilitate Coast Guard attempts to recover from ICGS funds that were spent on the eight converted boats.<sup>40</sup>

On January 7 and 8, 2008, it was reported that the Coast Guard was seeking a repayment of \$96.1 million from ICGS for the patrol boats and had sent a letter to ICGS on December 28, 2007, inviting ICGS to a negotiation for a settlement of the issue.<sup>41</sup> Some observers questioned the strength of the government's legal case, and thus its prospects for recovering the \$96.1 million or some figure close to that.<sup>42</sup>

In early-June 2008, it was reported that:

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<sup>39</sup> Ibid, Objective #3 (page 6).

<sup>40</sup> Dan Caterinicchia, "Coast Guard Wants Refund For Ships," *Associated Press*, May 17, 2007; Renae Merle, "Coast Guard Seeks Deepwater Refund," *Washington Post*, May 18, 2007: D3.

<sup>41</sup> See Andrea Shalal-Esa, "Lockheed, Northrop Asked To Pay \$96 Mln For Bad Boats," *Reuters*, January 7, 2008; Geoff Fein, "Coast Guard Invites ICGS To Negotiate A Settlement Over 123-Foot Boat Issue," *Defense Daily*, January 8, 2008; Dan Caterinicchia, "Gov't Wants \$96M Refund For Faulty Ships," *Business Week*, January 8, 2008. See also Emelie Rutherford, "Coast Guard Wants \$96 Million From Deepwater Team For Bad Ships," *Inside the Navy*, January 14, 2008.

<sup>42</sup> See, for example, Geoff Fein, "Coast Guard Invites ICGS To Negotiate A Settlement Over 123-Foot Boat Issue," *Defense Daily*, January 8, 2008. See also Geoff Fein, "Rep. Taylor Chides Coast Guard Over Effort To Recoup Cutter Conversion Funds," *Defense Daily*, February 27, 2008.

At the behest of the Justice Department [DOJ], the Coast Guard said it will temporarily stop pursuing contractual remedies against Integrated Coast Guard Systems, the makers of the service's eight decommissioned 123-foot patrol boats.

In January, the Coast Guard sought a \$96 million refund from ICGS, a partnership between Northrop Grumman and Lockheed Martin, for the faulty converted hulls. It has since been preparing for alternative dispute resolution, said Rear Adm. Gary Blore, the Coast Guard's assistant commandant for acquisition and chief acquisition officer.

But in an apparent shift of strategy, those efforts have recently been put aside pending the outcome of a DOJ investigation into the matter.

"In light of the Department of Justice's lead on the investigation, we are taking a step back from our contractual actions, because we don't want those two — our administrative process and Department of Justice's process — to interfere with each other," Blore said at May 27 briefing. "We may re-pursue the contractual remedies depending on what happens with the Department of Justice, but for right now, in agreement with the Department of Justice, we're basically throwing our staff support behind them as they do their discovery and facts analysis."

Blore said the Coast Guard will provide DOJ and the Department of Homeland Security's inspector [g]eneral, which is a partner in the investigation, with documentation and technical support. They will also provide staff expertise in contracting and acquisitions processes.

Data will also be provided to DOJ as we "continue our own vigorous naval engineering analysis of the hull," Blore said....

It is not clear when DOJ stepped up its investigation into the 123-foot patrol boats, nor when such an investigation might be completed. Calls to DOJ and the DHS IG were not returned....

"I do not know how long the Department of Justice process will take, but I suppose it's inferred that the government sat down and discussed this," Blore said. "We feel the government's equities are best represented by letting the Department of Justice take the lead on this."<sup>43</sup>

## Fast Response Cutter (FRC)

**RFP, Contract Award, Protest of Award.** On March 14, 2007, the Coast Guard announced that it intended to procure the 12 FRC-B cutters directly from the manufacturer, rather than through ICGS.<sup>44</sup> On June 22, 2007, the Coast Guard issued

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<sup>43</sup> Rebekah Gordon, "Coast Guard Defers To Justice Department In Patrol Boat Inquiry," *Inside the Navy*, June 2, 2008. See also Philip Ewing, "CG Patrol Boat Talks Paused For DOJ Probe," *NavyTimes.com*, May 28, 2008.

<sup>44</sup> Coast Guard press release, "Coast Guard Reassigns Deepwater Replacement Patrol Boat Acquisition Project," March 14, 2007; Calvin Biesecker, "Coast Guard Strips FRC-B Patrol Boat Acquisition From ICGS," *Defense Daily*, March 15, 2007; Renae Merle, "Coast Guard (continued...)"

a Request for Proposals (RFP) for the FRC-B, with submissions from industry due November 19, 2007. The Coast Guard stated on May 1, 2008 that:

The FRC-B acquisition strategy includes procuring patrol boats based on an existing, proven design (Parent Craft). The Parent Craft is required to have been previously operated as a patrol craft in unrestricted service for a minimum of two years, or six years if only a single Parent Craft exists. Utilizing a proven design will reduce the time and cost required to design and develop the cutter.

To meet the current urgent need for patrol boat capability, the Coast Guard has established a required delivery of the first cutter no later than 2010. The remainder of the first 12 cutters will be delivered by 2012. The Request for Proposals has options that allow for the acquisition of up to 34 cutters.<sup>45</sup>

In February 2008, it was reported that the contract to be awarded by the Coast Guard could be valued at up to \$1.7 billion for 34 FRC-Bs, if all options are executed.<sup>46</sup>

The Coast Guard stated on May 22, 2008, that “Proposals are currently being evaluated and the contract is expected to be awarded in the third quarter of Fiscal Year 2008.”<sup>47</sup>

In early-June 2008, it was reported that the Coast Guard planned to award the contract in July 2008. The report stated:

“The Coast Guard has recently made a competitive range decision on the FRC-B,” Rear Adm. Gary Blore, the Coast Guard’s acquisition chief, said. “The competitive range includes offers with the most highly-rated proposals.”...

“What we are waiting for is for the contract award for FRC-B, and to get a little more evaluation information once we go into low-rate initial production on that patrol boat. We think there’s a reasonable chance that it may meet all the original requirements of the FRC. If it does, then, that may be the solution,” Blore said. “Right now, we’re not actively pursuing composites [i.e., composite materials for use in the hull for the FRC-A] and we’ll see where the FRC-B leads us.”<sup>48</sup>

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<sup>44</sup> (...continued)

Cancels Contract,” *Washington Post*, March 15, 2007; and David Stout, “Coast Guard Cancels Contract For Vessel,” *New York Times*, March 15, 2007.

<sup>45</sup> Coast Guard discussion of FRC-B program on the Internet at [<http://www.uscg.mil/acquisition/frcb/projectdescription.asp>].

<sup>46</sup> Andrea Shalal-Esa, “US Cost Guard Sees Patrol Boat Award in May or June,” *Reuters*, February 11, 2008. See also Stew Magnuson, “Not So Fast on Fast Response Cutters, Coast Guard Says,” *National Defense Magazine*, February 2008.

<sup>47</sup> Source: Coast Guard discussion of FRC-B program on the Internet at [<http://www.uscg.mil/acquisition/frcb/default.asp>].

<sup>48</sup> Rebekah Gordon, “Coast Guard To Award Contract In July For Fast Response Cutter B,” *Inside the Navy*, June 2, 2008.

On July 11, 2008, the Coast Guard announced that it was delaying its award of the FRC contract to September or early October 2008. A press report on the announcement stated:

The Coast Guard Friday said it is delaying source selection of its Fast Response Cutter (FRC) until September or early October, a Coast Guard official said...

“While the Coast Guard is interested in obtaining a patrol boat as soon as possible, it is even more important that we acquire the Fast Response Cutter that represents the best value, one intended to serve the public for over 20 years,” said Rear Adm. Gary Blore, the Coast Guard’s chief acquisition officer, in an all hands message....

“The source selection process for the Fast Response Cutter is ongoing at this time. The Coast Guard is actively engaged in discussions with all offerors in the competitive range. The competitive range includes those offerors with the most highly rated proposals,” Blore said. “Those discussions will provide all offerors in the competitive range an opportunity to improve their proposals and address any deficiencies and/or weaknesses. This brief discussion period — relative to the time we will use these assets—will enhance the Coast Guard’s ability to make an award based on the best value to the government, helping to ensure that the Coast Guard gets a patrol boat that is optimal for our missions.”

To accommodate these additional discussions, the anticipated contract award date is now September or early October of this year, he added.<sup>49</sup>

On September 26, 2008, the Coast Guard announced that it had awarded an \$88-million contract to Bollinger Shipyards for the design and construction of the FRC-B, which the Coast Guard now refers to as the Sentinel class. A Coast Guard press release about the contract award stated:

The 153-foot [FRC-B] cutter, which will be capable of speeds of over 28 knots, will be built at Bollinger’s shipyard in Lockport, La. This is a firm fixed price contract with an economic price adjustment. The approximate maximum value of this contract, if all options are exercised for a total of 34 patrol boats, is \$1.5 billion over a period of between six and eight years.

The winning design is based on the [Dutch] Damen 4708 [patrol boat design], which has conducted operations similar to those the Sentinel Class patrol boat will perform. Using a proven (or parent craft) design, will ensure that the Coast Guard receives new patrol boats capable of performing the required missions as soon as possible.

“We feel confident in the design we have chosen for the Sentinel Class,” said Rear Adm. Gary T. Blore, the Coast Guard’s assistant commandant for acquisition. “Providing a patrol boat that will provide superior service to the

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<sup>49</sup> Geoff Fein, “Coast Guard Delays FRC Selection To September, Early October,” *Defense Daily*, July 14, 2008. See also Christopher P. Cavas, “Fast Response Cutter Decision Delayed,” *NavyTimes.com*, July 11, 2008.

American public and be crewed by the next several generations of Coast Guard men and women is an extraordinary responsibility.”

The Coast Guard’s Acquisition Directorate followed a disciplined process to determine the award of the Sentinel Class patrol boat project, including a careful analysis of operational requirements; conducting worldwide market research; close consultation with Coast Guard technical authorities; use of third party independent review and an assessment of the most competitive designs put forth by industry in responses to the Coast Guard’s June 2007 solicitation.

“Besides awarding a contract for design and construction of a world-class patrol boat, we have demonstrated the importance of acquisition reforms introduced by our Commandant and how well they are serving the taxpayer.” said Rear Adm. Blore.

To meet specific U.S. Coast Guard mission requirements, a stern launch and increased speed capability were incorporated into the winning design. The Sentinel Class will be 153 feet long, capable of speeds of 28 plus knots, and armed with one stabilized remotely-operated 25mm chain gun and four crew-served .50-caliber machine guns. It will be able to operate independently for five days at sea and be underway for 2,500 hours per year. The Sentinel will accommodate 22 crew members. A state-of-the-market command, control, communications, computer, intelligence, surveillance, and reconnaissance (C4ISR) system will be fully interoperable with other Coast Guard assets as well as those of the Department of Defense and the Department of Homeland Security.

The first Sentinel will be delivered to Coast Guard District 7, based in Miami, in the fall of 2010. It will complete a comprehensive operational test and evaluation period, and then enter operational service in the Caribbean area of responsibility.<sup>50</sup>

On October 7, 2008, the shipbuilding firm Marinette Marine filed a protest with GAO of the Coast Guard’s contract award to Bollinger. GAO has until January 15, 2008, to issue its decision on the matter. As a result of the protest, the Coast Guard

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<sup>50</sup> Coast Guard press release dated September 26, 2008, entitled “Media Advisory: Command and Coast Guard Leaders to Announce Coast Guard Award of the Contract for Design and Construction of Fast Response Cutter/Sentinel Class Patrol Boat.” The briefing slides presented by the Coast Guard at a September 29, 2008 media roundtable on the award were posted on the Internet by the Coast Guard at [<http://www.uscg.mil/acquisition/newsroom/pdf/sentinelmediabrief.pdf>]. See also Rebekah Gordon, “Coast Guard Awards Bollinger Fast Response Cutter Contract,” *InsideDefense.com (DefenseAlert-Daily News)*, September 26, 2008; Katherine McIntire Peters, “Coast Guard Awards Patrol Boat Contract to Fill Critical Void,” *GovernmentExecutive.com*, September 29, 2008; Bettina H. Chavanne, “USCG Acknowledges Mistakes On 123, Awards FRC Contract,” *Aerospace Daily & Defense Report*, September 30, 2008: 3; Bettina H. Chavanne, “USCG Awards FRC Contract To Bollinger Shipyards,” *Aerospace Daily & Defense Report*, September 29, 2008: 3; Christopher P. Cavas, “U.S. Coast Guard Chooses New Patrol Boat,” *Defense News*, October 6, 2008: 38;

has issued a stop-work order to Bollinger, and has stated that the protest will result in delays in the FRC-B program.<sup>51</sup>

An October 7, 2008 press report stated:

Last month a key component of the Deepwater effort moved forward with the award of a design and construction contract to Bollinger Shipyards for the first Fast Response Cutter (FRC), which is based on a Dutch design (*Defense Daily*, Sept. 29). That contract, potentially worth \$1.5 billion, is only for between 24 and 34 of the 153-foot Sentinel-class cutters even though the Coast Guard's requirement is for 58 of the vessels.

That's because the Coast Guard wants to leave open its options for either reintroducing competition into the program or possibly transitioning to a more advanced technological design at some point, [Rear Admiral Gary] Blore said.

At one time the Coast Guard had planned to have the FRCs made with a composite hull design, which it thought would reduce the life-time maintenance costs for the vessels. But the Coast Guard decided against that route because it feels the technology isn't mature enough. In fact, when it announced Bollinger's win, the Coast Guard said the composite technology would likely not be ready in the foreseeable future.

But Blore said the Coast Guard will keep its options open and look at the technology again in a couple of years. Still, he said, in his "professional judgment I don't see anything happening in composites in the next couple of years that's going to make a difference."

One of the reasons why it would be difficult to move forward with a composite hull patrol boat design is the fact the service time required to get the payback for the higher upfront costs is longer and will outstrip the life of the subsystems.

"So basically you have to strip the ship down and rebuild that from the inside out and when you do that it doesn't have a cost advantage over aluminum or steel construction."

Blore also said there are few ports around the United States, Canada and the Caribbean with ship composite shops compared to machine shops that work with aluminum and steel to conduct repairs, which could be a problematic.<sup>52</sup>

### **GAO Perspective.**

**June 2008 GAO Report.** In June 2008, GAO reported the following regarding the status of the FRC-B program:

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<sup>51</sup> Calvin Biesecker, "Marinette Marine Protests Coast Guard's FRC Award to Bollinger," *Defense Daily*, October 9, 2008: 6-7.

<sup>52</sup> Calvin Biesecker and Emelie Rutherford, "Coast Guard Expects Construction Costs For Fourth NSC To Rise Sharply," *Defense Daily*, October 7, 2008.

In February 2006, the Coast Guard suspended work on the FRC design proposed by the system integrator to assess and mitigate technical risks. This design was known as the FRC-A. The Commandant of the Coast Guard officially terminated FRC-A design efforts in February 2008 after approximately \$35 million had been obligated to ICGS. To meet an aggressive schedule, the FRC-A was initiated as an undefinitized contract action (UCA), meaning that the contractor was authorized to begin work and incur costs before a final agreement on contract terms and conditions, including price, was reached. Under UCAs, the government risks paying increased costs because the contractor has little incentive to control costs. The UCA was expected to be definitized in January 2006, but this has not yet occurred; Coast Guard officials anticipate its happening soon.

Over the past 2 years, the Coast Guard has pursued acquisition of a modified commercially available patrol boat with similar performance capabilities to the FRC-A, termed the FRC-B. The Coast Guard issued a request for proposals for the FRC-B and is currently reviewing contractor responses. Coast Guard officials told us there was sufficient competition, and they plan to award the contract in July 2008. The first FRC-B is scheduled to be delivered in 2010. The contract is for the design and production of up to 34 cutters. The Coast Guard intends to acquire 12 FRCs by 2012 for an estimated cost of \$593 million, or \$49.4 million per cutter. Coast Guard officials told us they are pursuing this 12-boat acquisition strategy to help fill the current patrol boat operational gap. They plan to assess the capabilities of the FRC-B before exercising options for additional cutters. The officials told us they have not updated the acquisition program baseline for this asset, and they do not plan to update cost estimates until the contract is awarded.<sup>53</sup>

**March 2008 GAO Report.** In March 2008, GAO reported that:

The Coast Guard obligated approximately \$35 million on the ICGS design for the FRC, but concerns prompted officials to put the acquisition on hold. To fill its urgent need for patrol boats, the Coast Guard plans to award a contract for a commercially available design of the FRC. Coast Guard officials said this approach will help ensure competition and meet their tight time frames. The new requirements for this design of the FRC have some differences. These include a top speed that is 2 knots slower — 28 instead of 30 knots — and allowance of a manual small-boat launch and recovery system that Coast Guard officials said is not as safe and requires more crew to operate than the preferred stern ramp system.<sup>54</sup>

The same GAO report also stated:

*FRC-A Design Efforts Remain Suspended*

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<sup>53</sup> Government Accountability Office, *Coast Guard[:] Change in Course Improves Deepwater Management and Oversight, but Outcome Still Uncertain*, GAO-08-745, June 2008, p. 37.

<sup>54</sup> Government Accountability Office, *Status of Selected Aspects of the Coast Guard's Deepwater Program*, GAO-08-270R, March 11, 2008, p. 2.



Since the FRC-A acquisition effort began, the Coast Guard obligated approximately \$35 million to ICGS for the design of this asset, but a viable design has not been produced. Coast Guard officials told us that at this time design efforts remain suspended; they do not expect to incur any additional costs related to the FRC-A. The original estimate for the fleet of 58 FRC-As was approximately \$3.2 billion.

Due to high risk and uncertain cost savings, Coast Guard officials recommended to the Commandant that the Coast Guard not pursue acquisition of an FRC-A design that includes unproven composite hull technology. The officials told us this recommendation was largely based on a third-party analysis that found the composite technology unlikely to meet the desired 35-year service life under the Coast Guard's operational conditions. Therefore, officials believe that the use of the proposed composite materials would not offset high initial acquisition costs, as ICGS had initially proposed.

#### *Cost, Schedule, and Performance of FRC-B*

In June 2007, the Coast Guard issued an RFP for the design, construction, and delivery of a modified commercially available patrol boat for the FRC-B. The Coast Guard estimated, in late 2006, that the total acquisition cost for 12 FRC-Bs would be \$593 million. Coast Guard officials do not plan to update cost estimates for the FRC-B until after the contract is awarded. The Coast Guard is currently evaluating proposals and expects to award the FRC-B contract in the third quarter of fiscal year 2008, with the lead cutter to be delivered in 2010. Coast Guard officials stated that their goal is still to acquire 12 FRC-Bs by 2012. The contract will include a 2-year base period for the design and production of the lead cutter and six 1-year option periods. The first option period includes 3 low-rate initial production cutters, and the subsequent five option periods include an option of 4 or 6 cutters each. The Coast Guard intends to award a fixed price contract for design and construction of the FRC-B, with the potential to acquire a total of 34 cutters.

Regarding performance, there are some key differences in the FRC-B, as outlined in the RFP, compared with the requirements for the FRC-A. One difference is speed — the Coast Guard lowered the minimum requirement for sprint speed from 30 knots for the FRC-A to 28 for the FRC-B. Another pertains to onboard small boat launch-and-recovery mechanisms: the initial design for the FRC-A included a stern ramp launch. This capability is not required on the FRC-B. However, Coast Guard officials expressed a preference for the stern ramp launch-and-recovery system because it would be safer and require fewer crew to operate than a manual alternative. Coast Guard officials said that eliminating these design requirements would ensure more competition on the open market and meet their urgent need for patrol boats.<sup>55</sup>

## **Revolving Door and Potential for Conflicts of Interest**

The so-called revolving door, which refers to the movement of officials between positions in government and industry, can create benefits for government and industry in terms of allowing each side to understand the other's needs and concerns,

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<sup>55</sup> Ibid, Objective #2 (page 3).

and in terms of spreading best practices from one sector to the other. At the same time, some observers have long been concerned that the revolving door might create conflicts of interest for officials carrying out their duties while in government positions. A March 25, 2007, news article stated in part:

Four of the seven top U.S. Coast Guard officers who retired since 1998 took positions with private firms involved in the Coast Guard's troubled \$24 billion fleet replacement program, an effort that government investigators have criticized for putting contractors' interests ahead of taxpayers'.

They weren't the only officials to oversee one of the federal government's most complex experiments at privatization, known as Deepwater, who had past or subsequent business ties to the contract consortium led by industry giants Northrop Grumman and Lockheed Martin.

The secretary of transportation, Norman Y. Mineta, whose department included the Coast Guard when the contract was awarded in 2002, was a former Lockheed executive. Two deputy secretaries of the Department of Homeland Security, which the Coast Guard became part of in 2003, were former Lockheed executives, and a third later served on its board.

Washington's revolving-door laws have long allowed officials from industry giants such as Lockheed, the nation's largest defense contractor, to spend parts of their careers working for U.S. security agencies that make huge purchases from those companies, though there are limits.

But Deepwater dramatizes a new concern, current and former U.S. officials said: how dwindling competition in the private sector, mushrooming federal defense spending and the government's diminished contract management skills raise the stakes for potential conflicts of interest.

Deepwater also illustrates how federal ethics rules carve out loopholes for senior policymakers to oversee decisions that may benefit former or prospective employers. These include outsourcing strategies under which taxpayers bear most of the risks for failure, analysts said.

There is no sign that any of the retired admirals or former Lockheed officials did anything illegal.

But the connections between the agencies and the contractors have drawn the attention of the DHS inspector general, Richard L. Skinner. "That is on our radar screen," he said. "It's something we are very sensitive to."<sup>56</sup>

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<sup>56</sup> Spencer S. Hsu and Renae Merle, "Coast Guard's Purchasing Raises Conflict-Of-Interest Flags," *Washington Post*, March 25, 2007.

## Potential Options for Congress

In addition to approving or modifying the Coast Guard's requests for FY2009 acquisition funding Deepwater programs, potential options for Congress regarding the Deepwater program include but are not limited to the following:

- continue to track the Coast Guard's management and execution of Deepwater acquisition, including implementation of reform actions announced by the Coast Guard itself or recommended by GAO;
- modify reporting requirements for the Deepwater program;
- prohibit the obligation or expenditure of some or all FY2009 funding for Deepwater acquisition programs until the Coast Guard or DHS takes certain actions or makes certain certifications regarding the Deepwater program; and
- pass legislation to codify Deepwater acquisition reforms that the Coast Guard has already announced, or to change Deepwater acquisition in other ways.

## Legislative Activity in 110<sup>th</sup> Congress

### Laws and Bills

Laws and bills in the 110<sup>th</sup> Congress relating to Deepwater acquisition include the following:

- **H.R. 2638/P.L. 110-329** of September 30, 2008, an FY2009 consolidated appropriations act that incorporated the FY2009 DHS appropriations act;
- **H.R. 2764/P.L. 110-161** of December 26, 2007, an FY2008 consolidated appropriations act that incorporated the FY2008 DHS appropriations act;
- **H.R. 2206/P.L. 110-28** of May 25, 2007, the U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act of 2007;
- **H.R. 2830/S. 1892**, the Coast Guard Authorization Act of 2008;
- **H.R. 6999**, the Integrated Deepwater Program Reform Act of 2008;
- **H.R. 2722/S. 924**, the Integrated Deepwater Program Reform Act; and
- **S. 889**, the Deepwater Accountability Act.

## Summary of Action on FY2009 Acquisition Funding Request

**Table 4** summarizes action on the FY2009 acquisition funding request for Deepwater acquisition programs.

**Table 4. Action on FY2009 Acquisition Funding Request**  
(in millions of dollars, rounded to nearest tenth)

	Request	Appropriation					
		House (H.R. 6947)	House change from request	Senate (S. 3181)	Senate change from request	Compromise (H.R. 2638)	Compromise change from request
<i>Air assets</i>							
Maritime Patrol Aircraft	86.6	86.6	0	86.6	0	86.6	0
HH-60 Conversion	52.7	52.7	0	52.7	0	52.7	0
HH-65 Conv./Sust. <sup>a</sup>	64.5	64.5	0	64.5	0	64.5	0
HC-130H Conv./Sust. <sup>a</sup>	24.5	24.5	0	24.5	0	24.5	0
HC-130J Fleet Intro. <sup>a</sup>	0	0	0	23.7	23.7	13.3	13.3
Armed Helo Equip. <sup>a</sup>	0	0	0	0	0	0	0
UAS <sup>a</sup>	3.0	0	-3.0	3.0	0	3.0	.0
<i>Subtotal aircraft</i>	<i>231.3</i>	<i>228.3</i>	<i>-3.0</i>	<i>255.0</i>	<i>23.7</i>	<i>244.6</i>	<i>13.3</i>
<i>Surface assets</i>							
NSC	353.7	300.0	-53.7	353.7	0	353.7	0
OPC	3.0	3.0	0	3.0	0	3.0	0
FRC-B	115.3	115.3	0	115.3	0	115.3	0
Deepwater small boats	2.4	2.4	0	2.4	0	2.4	0
WMEC sustainment <sup>a</sup>	35.5	35.5	0	35.5	0	35.5	0
Patrol boats sustainment	30.8	30.8	0	30.8	0	30.8	0
FRC-A	0	0	0	0	0	0	0
Polar icebreaker sust.	0	0	0	0	0	30.3	30.3
<i>Subtotal surface ships</i>	<i>540.7</i>	<i>487.0</i>	<i>-53.7</i>	<i>540.7</i>	<i>0</i>	<i>571.0</i>	<i>30.3</i>
<i>Other</i>							
Govt. program mgt.	58.0	58.0	0	58.0	0	58.0	0
Systems eng. and int. <sup>a</sup>	33.1	33.1	0	33.1	0	33.1	0
C4ISR	88.1	88.1	0	88.1	0	88.1	0
Deepwater logistics	37.7	37.7	0	37.7	0	37.7	0
Tech. Obsol. Prev. <sup>a</sup>	1.5	1.5	0	1.5	0	1.5	0
<i>Subtotal other</i>	<i>218.4</i>	<i>218.4</i>	<i>0</i>	<i>218.4</i>	<i>0</i>	<i>218.4</i>	<i>0</i>
<b>TOTAL FY2008</b>	<b>990.4</b>	<b>933.7</b>	<b>-56.7</b>	<b>1,014.1</b>	<b>23.7</b>	<b>1034.0</b>	<b>43.6</b>
<i>Rescissions of prior-year funding</i>							
UAVs	0	-20.0	-20.0	0	0	0	0
<i>Subtotal rescissions</i>	<i>0</i>	<i>-20.0</i>	<i>-20.0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>NET TOTAL</b>	<b>990.4</b>	<b>913.7</b>	<b>-76.7</b>	<b>1,041.1</b>	<b>23.7</b>	<b>1034.0</b>	<b>43.6</b>

**Sources:** U.S. Coast Guard Posture Statement With [FY] 2009 Budget in Brief, p. 49 (Table 4); H.Rept. 110-862 of September 18, 2008 on H.R. 6947; and S.Rept. 110-396 of June 23, 2008 on S. 3181. Totals may not add due to rounding.

- a. Conv./Sust. is Conversion/Sustainment Projects; Fleet Intro. is Fleet Introduction; Armed Helo. Equip. is Armed Helicopter Equipment (Airborne Use of Force); UAS is Unmanned Aircraft System; WMEC is medium-endurance cutter; eng. and int. is engineering and integration; Tech. Obsol. Prev. is Technology Obsolescence Prevention.

## **FY2009 DHS Appropriations Act (H.R. 2638/P.L. 110-329)**

**House.** The House Appropriations Committee, in its report (H.Rept. 110-862 of September 18, 2008) on the FY2009 DHS Appropriations bill (H.R. 6947), recommended reducing the Coast Guard's FY2009 acquisition funding request for Deepwater programs by \$56.7 million, including a \$3.0-million reduction to Unmanned Aircraft Systems (UAS) and a \$53.7 million reduction to the NSC. The report also recommended rescinding \$20.0 million in prior-year appropriations for unmanned air vehicles (UAV).

H.R. 6947 states, in the section on the Coast Guard's Acquisition, Construction, and Improvements (AC&I) account, that:

\$933,744,000 shall be available until September 30, 2013, for the Integrated Deepwater Systems program: Provided, That of the funds made available for the Integrated Deepwater Systems program, \$228,300,000 is for aircraft and \$487,003,000 is for surface ships: Provided further, That \$500,000,000 of the funds provided for the Integrated Deepwater Systems program may not be obligated until the Committees on Appropriations of the Senate and the House of Representatives receive directly from the Coast Guard and approve a plan for expenditure that —

- (1) defines activities, milestones, yearly costs, and lifecycle costs for each new procurement of a major asset, including an independent cost estimate for each;
- (2) identifies lifecycle staffing and training needs of Coast Guard project managers and procurement and contract staff;
- (3) identifies competition to be conducted in, and summarizes the approved acquisition strategy for, each procurement;
- (4) includes a certification by the Chief Human Capital Officer of the Department of Homeland Security that current human capital capabilities are sufficient to execute the plan;
- (5) includes an explanation of each procurement that involves an indefinite delivery/indefinite quantity contract and explains the need for such contract;
- (6) identifies individual project balances by fiscal year, including planned carryover into fiscal year 2009 by project;
- (7) identifies operational gaps by asset and explains how funds provided in this Act address the shortfalls between current operational capabilities and requirements;
- (8) includes a listing of all open Government Accountability Office and Office of Inspector General recommendations related to the program and the status of

Coast Guard actions to address the recommendations, including milestones for fully addressing them;

(9) includes a certification by the Chief Procurement Officer of such Department that the program has been reviewed and approved in accordance with the investment management process of the Department, and that the process fulfills all capital planning and investment control requirements and reviews established by the Office of Management and Budget, including Circular A-11, part 7;

(10) identifies use of the Defense Contract Audit Agency;

(11) identifies the use of independent validation and verification; and

(12) is reviewed by the Government Accountability Office:

Provided further, That no funding may be obligated for low rate initial production or initial production of any Integrated Deepwater Systems program asset until Coast Guard revises its Major Systems Acquisition Manual procedures to require a formal design review prior to the authorization of low rate initial production or initial production; Provided further, That the Secretary of Homeland Security shall submit to the Committees on Appropriations of the Senate and the House of Representatives, in conjunction with the President's fiscal year 2010 budget, a review of the Revised Deepwater Implementation Plan that identifies any changes to the plan for the fiscal year; an annual performance comparison of Integrated Deepwater Systems program assets to pre-Deepwater legacy assets; a status report of legacy assets; a detailed explanation of how the costs of legacy assets are being accounted for within the Integrated Deepwater Systems program; and the earned value management system gold card data for each Integrated Deepwater Systems program asset: Provided further, That the Secretary shall submit to the Committees on Appropriations of the Senate and the House of Representatives a comprehensive review of the Revised Deepwater Implementation Plan every five years, beginning in fiscal year 2011, that includes a complete projection of the acquisition costs and schedule for the duration of the plan through fiscal year 2027...

Provided further,... That of amounts unexpended under this heading in Public Law 108-334 for VTOL unmanned aerial vehicles (VUAV), \$20,000,000 is rescinded: Provided further, That subsections (a), and (b) of section 6402 of the U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act, 2007 (Public Law 110-28) shall apply to fiscal year 2009.<sup>57</sup>

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<sup>57</sup> Section 6402 of P.L. 110-28 of May 25, 2007, the U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act of 2007, is a general provision relating to DHS. Subsections (a), (b), and (d)(1) of Section 6402 [(d)(1) was cited in Senate bill language; see subsequent footnote] state:

SEC. 6402. (a) IN GENERAL- Any contract, subcontract, task or delivery order described in subsection (b) shall contain the following:

(1) A requirement for a technical review of all designs, design changes, and engineering change proposals, and a requirement to specifically address all

(continued...)

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<sup>57</sup> (...continued)

engineering concerns identified in the review before the obligation of further funds may occur.

(2) A requirement that the Coast Guard maintain technical warrant holder authority, or the equivalent, for major assets.

(3) A requirement that no procurement subject to subsection (b) for lead asset production or the implementation of a major design change shall be entered into unless an independent third party with no financial interest in the development, construction, or modification of any component of the asset, selected by the Commandant, determines that such action is advisable.

(4) A requirement for independent life-cycle cost estimates of lead assets and major design and engineering changes.

(5) A requirement for the measurement of contractor and subcontractor performance based on the status of all work performed. For contracts under the Integrated Deepwater Systems program, such requirement shall include a provision that links award fees to successful acquisition outcomes (which shall be defined in terms of cost, schedule, and performance).

(6) A requirement that the Commandant of the Coast Guard assign an appropriate officer or employee of the Coast Guard to act as chair of each integrated product team and higher-level team assigned to the oversight of each integrated product team.

(7) A requirement that the Commandant of the Coast Guard may not award or issue any contract, task or delivery order, letter contract modification thereof, or other similar contract, for the acquisition or modification of an asset under a procurement subject to subsection (b) unless the Coast Guard and the contractor concerned have formally agreed to all terms and conditions or the head of contracting activity for the Coast Guard determines that a compelling need exists for the award or issue of such instrument.

(b) CONTRACTS, SUBCONTRACTS, TASK AND DELIVERY ORDERS COVERED- Subsection (a) applies to —

(1) any major procurement contract, first-tier subcontract, delivery or task order entered into by the Coast Guard;

(2) any first-tier subcontract entered into under such a contract; and

(3) any task or delivery order issued pursuant to such a contract or subcontract....

(d) REPORTS- (1) Not later than 30 days after the date of enactment of this Act, the Commandant of the Coast Guard shall submit to the Committees on Appropriations of the Senate and the House of Representatives; the Committee on Commerce, Science and Transportation of the Senate; and the Committee on Transportation and Infrastructure of the House of Representatives: (i) a report on the resources (including training, staff, and expertise) required by the Coast Guard to provide appropriate management and oversight of the Integrated

(continued...)

In its report (H.Rept. 110-862 of September 18, 2008) on H.R. 6947, the House Appropriations Committee stated:

#### AVIATION MISSION HOUR GAP

The Committee is concerned about the significant shortfall of maritime patrol aircraft (MPA) resource hours currently confronting Coast Guard, which estimates that it will be nearly 50 percent below its MPA resource hour needs in 2008. This gap is not expected to be eliminated until 2015. One example of this gap is the absence of permanent maritime patrol aircraft capability operating from Air Station Borinquen, Puerto Rico. The Committee is concerned about the impact of this absence upon Coast Guard's ability to patrol the highly trafficked smuggling routes of the Caribbean Basin. Coast Guard is directed to report to the Committee no later than February 16, 2009, on its plan to provide adequate resources for the maritime surveillance mission needs in the Air Station Borinquen area of responsibility.

Coast Guard is in the process of analyzing short term, stop-gap measures to address its MPA capability needs until its large-scale acquisitions are in full operation. The Committee has included \$10,000,000 to fund such stop-gap measures. Before this funding may be obligated, Coast Guard shall submit an expenditure plan for approval to the Committees on Appropriations.

#### LEGACY CUTTER SUSTAINMENT

The Committee is concerned about Coast Guard's reliance upon high endurance and medium endurance cutters that are rapidly aging, many of which have completed over 30 years of service life, and the implications this has for the mission availability of these assets. As of the end of fiscal year 2007, the 378-foot, 270-foot, and 210-foot cutters had a "percent time fully mission capable" (PTFMC) combined average of only 58.3 percent, 33.7 percent below the combined average PTFMC target for these cutters. These concerns are punctuated by recent major causalities, crew habitability issues, and significant maintenance costs. According to Coast Guard's 2008 Revised Deepwater Implementation Plan, the 378-foot cutter fleet will be operating through 2017; the 270-foot cutter fleet will be operating through 2027; and the 210-foot cutter fleet will be operating through 2022. In each case, the expected operating life is much longer than forecast just two years ago. The Committee directs Coast Guard to provide, no later than February 16, 2009, a detailed analysis of maintenance costs for the 378-foot, 270-foot, and 210-foot classes of cutters, including: comparisons of pre and post mission effectiveness projects (where applicable); examination of major engineering causalities over the last three years; and an examination of the costs and benefits of an intensive maintenance program upon availability through the remainder of the cutters' remaining service lives, as per the forecasts contained in the 2008 Revised Deepwater Implementation Plan....

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<sup>57</sup> (...continued)

Deepwater Systems program; and (ii) a report on how the Coast Guard will utilize full and open competition for any contract that provides for the acquisition or modification of assets under, or in support of, the Integrated Deepwater Systems program, entered into after the date of enactment of this Act....



POLAR ICEBREAKING OPERATING AND MAINTENANCE COSTS AND FUTURE POLAR NEEDS<sup>58</sup>

The Committee is concerned about Coast Guard's ability to meet its polar operations mission requirements and provide the United States with the capability to support national interests in the polar regions. The Committee provides \$200,000, as requested, to conduct an analysis of national mission needs in the high latitude regions to inform the national polar policy debate.

In fiscal year 2006 the Committees on Appropriations approved an Administration request for the National Science Foundation (NSF), the primary user of the three Coast Guard polar icebreaker vessels, to fund the costs of operating and maintaining these aging vessels. Because it has become more apparent that the national interest in the polar regions extends beyond scientific research, the Committee questions whether this arrangement should continue. Accordingly, the Committee directs Coast Guard and NSF to renegotiate the existing agreement in order to return the budget for operating and maintaining these vessels to Coast Guard for fiscal year 2010. This change is consistent with a new joint plan for Coast Guard support of scientific research by NSF and other Federal agencies, which also is to be included in the 2010 budget request. NSF shall retain responsibility for the contracting of scientific support services that Coast Guard does not have the capability to perform or cannot perform on a cost-competitive basis. The Committee is aware of a \$4,000,000 funding shortfall related to the caretaker status of the POLAR STAR, and directs Coast Guard to address this shortfall within the amounts appropriated for fiscal year 2009....

## DEEPWATER EXPENDITURE PLAN

Consistent with fiscal year 2008, the Committee includes bill language requiring Coast Guard to submit a detailed expenditure plan. A total of \$500,000,000 of this appropriation shall remain unavailable until GAO reviews and the Committees on Appropriations approve the plan. The expenditure plan must contain the following: lifecycle staffing and training needs; identification of procurement competition, acquisition strategy, and an explanation for indefinite delivery/indefinite quality contracts for each procurement; activities, milestones, yearly costs, and lifecycle costs of each major asset, including independent cost estimates; DHS Chief Human Capital Officer certification of sufficient human capital capabilities; identification of project balances by fiscal year and operational gaps for each asset; DHS Chief Procurement Officer (CPO) certification of investment management process compliance; status of open OIG and GAO recommendations; and identification of the use of the Defense Contract Audit Agency. GAO is directed to continue its oversight of the Deepwater program, with a focus on reviewing the expenditure plan and assessment of the operational gaps identified by Coast Guard and plans to address these gaps. In addition, no funding may be obligated for low rate or initial production of a Deepwater asset until Coast Guard revises its Major Systems Acquisition Manual procedures to require a formal design review prior to the authorization of low rate initial production or initial production.

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<sup>58</sup> For additional discussion of Coast Guard polar icebreakers, which previously were not funded under Deepwater acquisition, see CRS Report RL34391, *Coast Guard Polar Icebreaker Modernization: Background, Issues, and Options for Congress*, by Ronald O'Rourke.

## DEEPWATER

The Committee recommends \$933,744,000 for Deepwater, \$56,700,000 below the amount requested and \$150,478,000 above the amount provided in fiscal year 2008.

## MARITIME PATROL AIRCRAFT (MPA)

The Committee recommends \$86,600,000 for two additional MPAs, the same as the amount requested. To date, \$570,035,000 has been appropriated for 12 MPAs. In April 2003, Coast Guard informed the Committee that the requirements for the MPA were as follows: (1) the ability to arrive on the scene of 90 percent of search and rescue emergencies within two hours of initial notification; and (2) the ability to travel 300 nautical miles in 90 minutes (212 knot ground speed, with time to climb factored in), stay on scene for approximately four hours, and return over 300 nautical miles with required fuel reserves. However, the Committee understands that Coast Guard's formal requirements for the MPA and a plan for operational testing of those requirements have not been finalized yet. This is surprising since the MPA entered the operational testing phase in March 2008. The Committee directs Coast Guard to withhold obligation of 2009 MPA funding until its formal requirements for the MPA and the MPA's operational testing plan are provided to the Committee.

## UNMANNED AIRCRAFT SYSTEMS

The Committee does not provide the \$3,000,000 requested to study unmanned aerial vehicle solutions for meeting Deepwater's maritime surveillance requirements. Instead, funding is provided for this study within the Research, Development, Test, and Evaluation account. The Vertical Unmanned Aerial Vehicle (VUAV) was originally conceived to be launched off of the National Security Cutters (NSC), enhancing the NSC's operational effectiveness by extending its surveillance range to approximately 100 nautical miles for up to twelve hours per day. In fact, the number of planned NSCs was reduced from 12 to 8 in part due to this anticipated extension of operational effectiveness. Unfortunately, the VUAV has not worked as planned, and Coast Guard has nothing to show for the \$114,550,590 it has obligated for this project. Because some of this obligated amount has not yet been expended and Coast Guard has no plans for its expenditure, the Committee rescinds \$20,000,000 currently unexpended for UAVs.

## LONG RANGE SURVEILLANCE AIRCRAFT (HC — 130J)

The first HC-130J was delivered in February 2008. However, due to parallel design and installation activities resulting in rework, changes in aircraft power requirements, late delivery of government-furnished equipment, and other changes, costs are likely to increase by 10 to 20 percent and additional costs are currently unbudgeted. Coast Guard is directed to provide the Committees on Appropriations with its finalized HC-130J Remediation Plan no later than August 1, 2008, and to identify unobligated funding that can be used to missionize all HC-130Js.

## NATIONAL SECURITY CUTTER

The Committee recommends \$300,000,000 for the NSC, \$53,700,000 below the amount requested and \$134,300,000 above the amount provided in fiscal year 2008. The request of \$353,700,000 is primarily for production of the fourth NSC. Technical reviews of the third NSC's fatigue enhancement design changes are being conducted by the Coast Guard Technical Authority, which is employing the services and expertise of the Carderock Division of the Naval Surface Warfare Center. Coast Guard anticipates completion of the design and technical reviews of the third NSC by December 2008.

The Committee reduces NSC funding for two main reasons. First, the Committee believes that construction of the fourth NSC likely will be delayed, since the design and technical changes made to the fourth NSC will require another substantive technical review. Second, GAO found that Coast Guard plans to proceed with issuance of a task order for long lead materials on the fourth NSC despite not having reliable data on which to base an evaluation of the contractor's proposed price. GAO has pointed out to the Committee that because Coast Guard lacks confidence in how the contractor is representing its cost and schedule performance on the NSC, Coast Guard is likely to be in the position of paying the contractor for future projects without the understanding necessary to evaluate proposed prices. The Committee directs Coast Guard to increase its visibility into the contractor's earned value management data before it enters into a contract to construct the fourth NSC. The Committee expects this enhanced visibility to lead to cost reductions.

## FAST RESPONSE CUTTER (FRC-B)/REPLACEMENT PATROL BOAT

The Committee provides the requested \$115,300,000 for limited production of the FRC — B/Replacement Patrol Boat. Coast Guard has proceeded with a competitive procurement for the FRC-B, with award projected for July 2008. The lead cutter is expected to be delivered two years later, in the second quarter of fiscal year 2010. The Committee is concerned that this \$115,300,000, when combined with the \$41,580,000 in prior year funds that Coast Guard plans to use for the FRC-B, results in an average cost for the three limited production vessels of \$52,000,000, well above earlier estimates provided by the Coast Guard. The Committee understands that cost estimates for this cutter are based on limited data and directs Coast Guard to take all steps necessary to control costs, including conducting a formal design review to ensure that at least 90 percent of the design drawings are complete by the critical design review stage.

## OFFSHORE PATROL CUTTER (OPC)

The Committee recommends \$3,003,000 for OPC requirements analysis, as requested. The OPC is the replacement cutter for the current 210-foot and 270-foot Medium Endurance cutters. In March 2006, after spending \$19,758,000, Coast Guard suspended OPC design efforts due to cost concerns. The Committee understands that in making a subsequent decision to proceed with the OPC requirements analysis, the Coast Guard documented the OPC's expected capabilities, a draft concept of operations, and an initial assessment of cost and schedule. Coast Guard is directed to provide this documentation to the Committees on Appropriations by October 1, 2008. The Committee directs Coast Guard to plan for a full and open competition for the OPC.

## C4ISR

The Committee understands that Coast Guard does not have an approved acquisition strategy for C4ISR. Coast Guard needs to develop an architecture with common components for use on assets and to decide whether to acquire C4ISR on an asset-by-asset basis or at a system level. The Committee understands that Coast Guard is revisiting the C4ISR approach proposed by the Deepwater contractor and is analyzing requirements and architecture. The Committee encourages such assessment and provides the \$88,100,000 requested for C4ISR. If not all of this funding is required for C4ISR, Coast Guard may use the remainder for additional modeling and simulation activities that will help in determining the capabilities of existing and planned assets and inform the number of Deepwater assets required....

## PERSONNEL

The Committee recommends \$95,572,000 for acquisition personnel, \$12,852,000 above the amount provided in fiscal year 2008. The total equals the amount requested for this purpose when the budgets proposed in Operating Expenses and AC&I are combined. Coast Guard faces at least three challenges as it seeks to improve its acquisition management and oversight. The first is a shortage of civilian acquisition staff, with an almost 20 percent vacancy rate. Coast Guard is directed to report to the Committees on any additional authorities or bonuses needed to attract civilian acquisition expertise. The second is the lack of acquisition career path for Coast Guard military personnel. Coast Guard is directed to explore the establishment of a dedicated acquisition and finance career field for military personnel and to report to the Committee on the benefits and costs of this option. The third challenge is Coast Guard's reliance on contractors for technical and programmatic expertise. The Committee is pleased to hear that Coast Guard is currently analyzing its workforce to determine which roles are appropriate for contractors. Such analysis should be provided to the Committee upon its completion.

## UNMANNED AERIAL SYSTEMS

The Committee provides \$3,000,000 [in the Coast Guard's Research, Development, Test, and Evaluation account] for Coast Guard's efforts to examine effective unmanned aerial systems (UAS) that pose low developmental risks and demonstrate cost-effectiveness. The Committee is pleased that Coast Guard is working with the Department of Defense to leverage UAS development, testing, and engineering efforts. Coast Guard is directed to report to the Committee no later than February 16, 2009, on its findings to date on determining the most effective UAS for maritime applications and for use with flight deck-equipped cutters. (Pages 79-80, 82, 86-88, 89, and 91)

**Senate.** The Senate Appropriations Committee, in its report (S.Rept. 110-396 of June 23, 2008) on the FY2009 DHS Appropriations bill (S. 3181), recommended increasing the Coast Guard's FY2009 acquisition funding request for Deepwater programs by \$23.7 million, with the increase going to HC-130J fleet introduction.

S. 3181 as reported by the Senate Appropriations Committee states, in the section on the Coast Guard's Acquisition, Construction, and Improvements (AC&I) account, that:

\$1,014,144,000 shall be available until September 30, 2013, for the Integrated Deepwater Systems program: Provided, That of the funds made available for the Integrated Deepwater Systems program, \$255,000,000 is for aircraft and \$540,703,000 is for surface ships: Provided further, That the Commandant shall submit a plan for expenditure to the Committees on Appropriations of the Senate and House of Representatives within 60 days after the date of enactment of this Act for funds made available for the Integrated Deepwater Program, that —

- (1) defines activities, milestones, yearly costs, and lifecycle costs for each procurement of a major asset, including an independent cost estimate for each;
- (2) identifies lifecycle staffing and training needs of Coast Guard project managers and of procurement and contract staff;
- (3) identifies competition to be conducted in each procurement;
- (4) describes procurement plans that do not rely on a single industry entity or contract;
- (5) includes a certification by the Chief Human Capital Officer of the Department that current human capital capabilities are sufficient to execute the plans discussed in the report;
- (6) contains very limited indefinite delivery/indefinite quantity contracts and explains the need for any indefinite delivery/indefinite quantity contracts;
- (7) identifies individual project balances by fiscal year, including planned carryover into fiscal year 2010 by project;
- (8) identifies operational gaps by asset and explains how funds provided in this Act address the shortfalls between current operational capabilities and requirements;
- (9) includes a listing of all open Government Accountability Office and Office of Inspector General recommendations related to the program and the status of Coast Guard actions to address the recommendations, including milestones for fully addressing them;
- (10) includes a certification by the Chief Procurement Officer of the Department that the program has been reviewed and approved in accordance with the investment management process of the Department, and that the process fulfills all capital planning and investment control requirements and reviews established by the Office of Management and Budget, including Circular A-11, part 7;
- (11) identifies use of the Defense Contract Auditing Agency;
- (12) includes a certification by the head of contracting activity for the Coast Guard and the Chief Procurement Officer of the Department that the plans for the program comply with the Federal acquisition rules, requirements, guidelines, and practices, and a description of the actions being taken to address areas of non-compliance, the risks associated with them along with plans for addressing these risks, and the status of their implementation;

(13) identifies the use of independent validation and verification; and

(14) is reviewed by the Government Accountability Office:

Provided further, That the Secretary of Homeland Security shall submit to the Committees on Appropriations of the Senate and the House of Representatives, in conjunction with the President's fiscal year 2010 budget, a review of the Revised Deepwater Implementation Plan that identifies any changes to the plan for the fiscal year; an annual performance comparison of Deepwater assets to pre-Deepwater legacy assets; a status report of legacy assets; a detailed explanation of how the costs of legacy assets are being accounted for within the Deepwater program; and the earned value management system gold card data for each Deepwater asset: Provided further, That the Secretary shall submit to the Committees on Appropriations of the Senate and the House of Representatives a comprehensive review of the Revised Deepwater Implementation Plan every 5 years, beginning in fiscal year 2011, that includes a complete projection of the acquisition costs and schedule for the duration of the plan through fiscal year 2027....

Section 522 states:

SEC. 522. Any funds appropriated to United States Coast Guard, 'Acquisition, Construction, and Improvements' for fiscal years 2002, 2003, 2004, 2005, and 2006 for the 110-123 foot patrol boat conversion that are recovered, collected, or otherwise received as the result of negotiation, mediation, or litigation, shall be available until expended for the Replacement Patrol Boat (FRC-B) program.

Section 530 states:

SEC. 530. Subsections (a), (b), and (d)(1) of section 6402 of the U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act, 2007 (Public Law 110-28) shall apply to fiscal year 2009.<sup>59</sup>

Section 540 states:

SEC. 540. The Secretary of Homeland Security shall require that all contracts of the Department of Homeland Security that provide award fees link such fees to successful acquisition outcomes (which outcomes shall be specified in terms of cost, schedule, and performance).

In its report (S.Rept. 110-396 of June 23, 2008) on S. 3181, the Senate Appropriations Committee stated:

#### DEEPWATER FUNDING

The Committee recommends \$1,014,144,000 for Deepwater, \$23,700,000 above the amount requested and \$230,878,000 above the fiscal year 2008 level. Details of major procurements under this program and changes to the request are provided below.

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<sup>59</sup> See a previous footnote for a discussion of Subsections (a), (b), and (d)(1) of section 6402 of Public Law 110-28.

### MARITIME PATROL AIRCRAFT

The recommendation includes \$86,600,000 for the Maritime Patrol Aircraft, the same as the level requested in the budget. This funding will allow the Coast Guard to acquire two aircraft (13 and 14), mission systems, logistics and spare parts. Once fully missionized, these aircraft will provide 2,400 annual maritime patrol hours.

### NATIONAL SECURITY CUTTER

The recommendation includes \$353,700,000 for the National Security Cutter [NSC], the same as the budget request. Of this amount, \$346,600,000 is for the production of NSC #4 and \$7,100,000 is for the structural retrofit of NSC #1. On May 8, 2008, the first NSC was accepted by the Coast Guard. NSC #1 has now entered a 22 — 24 month operation, test, and evaluation period. The Coast Guard has highlighted Information Assurance as a significant risk category. For example, the Coast Guard must meet TEMPEST certification to prevent unintended information emanation, and in order to process classified information. This certification has not occurred. The Coast Guard is to keep the Committee updated on progress made to resolve ongoing information assurance issues, including TEMPEST certification, in addition to the status of critical decision points and dates for all NSC's.

The Committee strongly supports the procurement of one National Security Cutter per year until all eight planned ships are procured. The continuation of production without a break will ensure that these ships, which are vital to the Coast Guard's mission, are procured at the lowest cost and that they enter the Coast Guard fleet as soon as possible.

### REPLACEMENT PATROL BOAT

The recommendation includes \$115,300,000 for the Coast Guard's replacement patrol boat known as the "Fast Response Cutter" [FRC — B]. Of this amount, \$94,000,000 is for production of FRC-B #3 and #4 and \$21,300,000 is for logistics (spares, program management, and crew training). The FRC-B program is critical for the Coast Guard to close the Coast Guard's patrol boat hours gap, which is approximately 100,000 hours below the desired level. The first FRC-B is scheduled for delivery during the fourth quarter of 2010 and will be ready for mission status in 2012. The Committee directs the Coast Guard to provide quarterly briefings on the status of this procurement, including critical decision points and dates, planned service life extensions of the existing 110 foot patrol boats, and patrol boat operational metrics.

### MISSION EFFECTIVENESS PROJECT

The recommendation includes \$66,300,000 for the Mission Effectiveness Project, the same as the budget request. Of this amount, \$35,500,000 is for sustainment of two 270 feet and three 210 feet medium endurance cutters, and \$30,800,000 is for sustainment of three 110 feet legacy patrol boats. This funding will allow the Coast Guard to extend the operational life of critical legacy cutters until Deepwater assets become available for missions.

## C-130J MISSIONIZATION AND FLEET INTRODUCTION

The Committee recommends \$23,700,000 to complete the missionization of aircraft 4 through 6, to include radars, sensors, identification systems, displays, antennas, and a mission operator's station. The request included no funding for this program. In November 2007, the Coast Guard reported the missionization project for the six C-130J's in inventory exceeded the estimated cost to complete by 15 to 20 percent, resulting in the missionization of only aircraft 1 through 3. While the Committee remains concerned with the program's price escalation, missionizing aircraft 4 through 6 is critical to closing the shortfall of maritime patrol resource hours, which is nearly 50 percent below its resource hour needs.

## DEEPWATER EXPENDITURE PLAN

The Committee requires the Coast Guard to submit an expenditure plan for Deepwater that contains the following: lifecycle staffing and training needs; identification of procurement competition and procurement plans that do not rely on a single entity or contract and contain only limited indefinite delivery, indefinite quantity contracts; activities, milestones, yearly costs, and lifecycle costs of each major asset, including independent cost estimates; DHS Chief Human Capital Officer certification of sufficient human capital capabilities; identification of project balances by fiscal year and operational gaps for each asset; DHS Chief Procurement Officer [CPO] certification of investment management process compliance; DHS CPO certification of compliance with Federal acquisition rules and actions taken to address areas of noncompliance; status of open Inspector General and Government Accountability Office [GAO] recommendations; and identification of the use of the Defense Contract Auditing Agency. GAO is directed to continue oversight of the Deepwater program, with focus on review of the expenditure plan and assessment of the operational gaps identified by the Coast Guard and the Coast Guard's plans to address these gaps. The Coast Guard is directed to brief the Committee on the process it will use to resolve deviations from specified contract requirements and to promptly notify the Committee of specific procurement contract deviations....

## DEEPWATER HUMAN CAPITAL

In accordance with section 6402 of the fiscal year 2007 Supplemental Appropriations Act (Public Law 110 — 28), the Coast Guard submitted a report on the resources (including training, staff, and expertise) required to provide appropriate management and oversight of the Integrated Deepwater Systems program. The report provided limited insight into the Coast Guard's human capital requirements, except to say that a workforce resource plan was being developed that provides the framework for assessing current and future workforce needs. Given the challenges this program has experienced and the Coast Guard's intention to assume the role of system integrator for all Deepwater assets, the Committee is concerned with the lack of progress made in developing workforce estimates. The Coast Guard is to brief the Committee by July 31, 2008, detailing the results of its workforce forecasting process and plans to fill staffing shortfalls that will ensure a capable and productive acquisition workforce now and in the future. (Pages 85-88)

S.Rept. 110-396 also states:



## TRANSFER ASSOCIATED WITH DEEPWATER MANAGEMENT

The Committee approves the request to transfer \$3,859,000 from the Systems Engineering and Integration PPA in the Acquisition, Construction, and Improvements [AC&I] appropriation to the Operating Expenses appropriation for General Services Administration [GSA] rent. This transfer is necessary to move all Government personnel and Government support contractors to one location and is part of the Coast Guard's strategy to shift management and oversight responsibilities from Deepwater contractor to the Coast Guard.<sup>60</sup>

## ACQUISITION PERSONNEL

Consistent with the budget request, the Committee transfers \$82,215,000 and 652 FTE from AC&I appropriation to OE appropriation to increase the oversight and ability to manage multiple major acquisition projects. This transfer will improve the stewardship of major systems acquisition, such as the Integrated Deepwater Systems Program. By transferring AC&I funding to OE, personnel can be surged to and from AC&I projects where needed and allow flexibility to match competencies to core requirements. The Committee recommends \$4,500,000 to hire 65 additional personnel to enhance the Coast Guard's ability to perform the systems integrator role for the Integrated Deepwater Program and to execute traditional acquisition projects. The recommended level is \$4,498,000 below the request. The Committee fully supports the Coast Guard's effort to be the systems integrator for the Integrated Deepwater Program. However, the request included funds for "full-year" FTE, which means the 65 new positions would need to be onboard by October 1, 2008. Given the Coast Guard's 18.5 percent vacancy rate for acquisition personnel, this is an unrealistic proposal. Therefore, the Committee recommendation provides half-year funding for this initiative. The Committee expects the Coast Guard to fully annualize the positions in fiscal year 2010. (Page 77)<sup>61</sup>

**Compromise.** In lieu of a conference report, there was a compromise version of the FY2009 DHS appropriations bill that was incorporated as Division D of H.R. 2638/P.L. 110-329 of September 30, 2008. (H.R. 2638, originally the FY2008 Department of Homeland Security appropriations bill, was amended to become an FY2009 consolidated appropriations bill that included, among other things, the FY2009 DHS appropriations bill.) The compromise version of H.R. 2638 was accompanied by an explanatory statement. Section 4 of H.R. 2638 states that the explanatory statement "shall have the same effect with respect to the allocation of funds and implementation of this Act as if it were a joint explanatory statement of a committee of conference."

H.R. 2638/P.L. 110-329 states, in the section on the Coast Guard's Acquisition, Construction, and Improvements (AC&I) account, that:

\$1,033,994,000 shall be available until September 30, 2013, for the Integrated Deepwater Systems program: Provided, That of the funds made available for the Integrated Deepwater Systems program, \$244,550,000 is for aircraft and

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<sup>60</sup> This transfer is also mentioned on page 84 of the report.

<sup>61</sup> This transfer is also mentioned on page 89 of the report.

\$571,003,000 is for surface ships: Provided further, That \$350,000,000 of the funds provided for the Integrated Deepwater Systems program may not be obligated until the Committees on Appropriations of the Senate and the House of Representatives receive directly from the Coast Guard and approve a plan for expenditure that —

- (1) defines activities, milestones, yearly costs, and life cycle costs for each new procurement of a major asset, including an independent cost estimate for each;
- (2) identifies life cycle staffing and training needs of Coast Guard project managers and procurement and contract staff;
- (3) identifies competition to be conducted in, and summarizes the approved acquisition strategy for, each procurement;
- (4) includes a certification by the Chief Human Capital Officer of the Department of Homeland Security that current human capital capabilities are sufficient to execute the expenditure plan;
- (5) includes an explanation of each procurement that involves an indefinite delivery/indefinite quantity contract and explains the need for such contract;
- (6) identifies individual project balances by fiscal year, including planned carryover into fiscal year 2010 by project;
- (7) identifies operational gaps by asset and explains how funds provided in this Act address the shortfalls between current operational capabilities and requirements;
- (8) includes a listing of all open Government Accountability Office and Office of Inspector General recommendations related to the program and the status of Coast Guard actions to address the recommendations, including milestones for fully addressing them;
- (9) includes a certification by the Chief Procurement Officer of the Department that the program has been reviewed and approved in accordance with the investment management process of the Department, and that the process fulfills all capital planning and investment control requirements and reviews established by the Office of Management and Budget, including Circular A-11, part 7;
- (10) identifies use of the Defense Contract Audit Agency;
- (11) includes a certification by the head of contracting activity for the Coast Guard and the Chief Procurement Officer of the Department that the plans for the program comply with the Federal acquisition rules, requirements, guidelines, and practices, and a description of the actions being taken to address areas of non-compliance, the risks associated with them along with plans for addressing these risks, and the status of their implementation;
- (12) identifies the use of independent validation and verification; and
- (13) is reviewed by the Government Accountability Office:

Provided further, That no funding may be obligated for low rate initial production or initial production of any Integrated Deepwater Systems program asset until Coast Guard revises its Major Systems Acquisition Manual procedures to require a formal design review prior to the authorization of low rate initial production or initial production: Provided further, That the Secretary of Homeland Security shall submit to the Committees on Appropriations of the Senate and the House of Representatives, in conjunction with the President's fiscal year 2010 budget, a review of the Revised Deepwater Implementation Plan that identifies any changes to the plan for the fiscal year; an annual performance comparison of Integrated Deepwater Systems program assets to pre-Deepwater legacy assets; a status report of legacy assets; a detailed explanation of how the costs of legacy assets are being accounted for within the Integrated Deepwater Systems program; and the earned value management system gold card data for each Integrated Deepwater Systems program asset: Provided further, That the Secretary shall submit to the Committees on Appropriations of the Senate and the House of Representatives a comprehensive review of the Revised Deepwater Implementation Plan every 5 years, beginning in fiscal year 2011, that includes a complete projection of the acquisition costs and schedule for the duration of the plan through fiscal year 2027...

Provided further, ... That subsections (a), and (b) of section 6402 of the U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act, 2007 (Public Law 110-28) shall apply to fiscal year 2009:<sup>62</sup> Provided further, That notwithstanding section 503 of this Act, amounts transferred from the 'Operating Expenses' appropriation for personnel compensation and benefits and related costs to adjust personnel assignment to accelerate management and oversight of new or existing projects may be transferred to the 'Operating Expenses' appropriation to be merged with that appropriation, to be available under the same terms and conditions for which that appropriation is available, when no longer required for project acceleration or oversight, or to otherwise adjust personnel assignment: Provided further, That the Committees on Appropriations of the Senate and the House of Representatives shall be notified of each transfer within 30 days after it is executed.

Section 517 states:

SEC. 517. Any funds appropriated to United States Coast Guard, 'Acquisition, Construction, and Improvements' for fiscal years 2002, 2003, 2004, 2005, and 2006 for the 110-123 foot patrol boat conversion that are recovered, collected, or otherwise received as the result of negotiation, mediation, or litigation, shall be available until expended for the Replacement Patrol Boat (FRC-B) program.

Section 533 states:

SEC. 533. The Secretary of Homeland Security shall require that all contracts of the Department of Homeland Security that provide award fees link such fees to successful acquisition outcomes (which outcomes shall be specified in terms of cost, schedule, and performance).

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<sup>62</sup> See earlier footnotes in this section for a discussion of subsections (a), and (b) of section 6402 of Public Law 110-28.

Section 551 states:

SEC. 551. From unobligated balances of prior year appropriations made available for Coast Guard `Acquisition, Construction, and Improvements', \$20,000,000 are rescinded: Provided, That no funds shall be rescinded from prior year appropriations provided for the National Security Cutter or the Maritime Patrol Aircraft: Provided further, That the Coast Guard shall submit notification in accordance with section 503 of this Act listing projects for which funding will be rescinded.

The explanatory statement accompanying H.R. 2638 stated:

#### Polar Icebreakers

One of the Coast Guard's missions is to provide the United States with the capability to support national interests in the polar regions. In a report recently submitted, the Coast Guard stated that the United States will need a maritime surface and air presence in the Arctic sufficient to support prevention and response regimes as well as diplomatic objectives. However, no funding has been requested for the Coast Guard's aging icebreakers despite its inability to meet current and projected polar operations mission responsibilities. The Coast Guard is directed to follow House report direction regarding the polar icebreaking operating budget. The Coast Guard should work with the National Science Foundation in the coming year to renegotiate the existing polar icebreaking agreement in order to return the budget for operating and maintaining its polar icebreakers to the Coast Guard in fiscal year 2010. The AC&I appropriation includes \$30,300,000 to reactivate the USCGC POLAR STAR for an additional 7-10 years of service life....

#### Deepwater

The bill provides \$1,033,994,000 for the Integrated Deepwater System Program (Deepwater). Of this amount, \$350,000,000 is unavailable for obligation until the Committees receive and approve a plan for expenditure, in accordance with the specified legislative conditions. In submitting its mandated review of this expenditure plan to the Committees, GAO is directed to provide an overall evaluation of the plan's value to the Coast Guard's management of Deepwater, and a qualitative, descriptive assessment of the degree with which the Coast Guard has complied with each legislative requirement.

#### Long Range Surveillance Aircraft (HC-130J)

The bill provides \$13,250,000 to missionize three HC-130Js. The Coast Guard is directed to provide its finalized HC-130J Remediation Plan to the Committees within 60 days after the date of enactment of this Act.

#### National Security Cutter

The bill provides \$353,700,000, as requested, for the National Security Cutter (NSC). It is questionable whether this amount will be sufficient to purchase the fourth NSC, according to recent information provided by the Coast Guard. This is a concern since, in August 2007, the Coast Guard entered into a Consolidated Contract Action to resolve all outstanding cost overruns incurred by the NSC contractor due to economic and customer changes that have occurred

over the past four years. No later than 30 days after the date of enactment of this Act, the Coast Guard is directed to provide the Committees with detailed information on all reasons why there may be nearly a 50 percent increase in the cost of this cutter and how it plans to manage this procurement within the dollars provided. To improve its management of this important program, the Coast Guard is directed to follow House report direction on the visibility of the contractor's earned value management system and Senate report direction regarding information assurance and critical decision points and dates.

#### Replacement Patrol Boat/FRC-B

The bill provides \$115,300,000, as requested, for limited production of the FRC-B. The Coast Guard is directed to take all steps necessary to control costs for this procurement, including conducting a formal design review to ensure that at least 90 percent of the design drawings are complete by the critical design review stage. The projected award date for the FRC-B has been delayed until the first quarter of 2009. The Coast Guard is directed to provide quarterly briefings to the Committees on the status of this procurement, including critical decision points and dates, planned service life extensions of existing 110-foot patrol boats, and patrol boat operational metrics.

#### Polar Icebreakers

The bill provides \$30,300,000 for the Coast Guard to reactivate the USCGC POLAR STAR.

### **Statement of Administration Policy on H.R. 2830**

An April 23, 2008, statement of Administration policy opposing passage of H.R. 2830 stated in part:

As well, the Administration urges the House to delete those provisions of the bill that would adversely affect Coast Guard missions. Specifically, the Administration urges the House to delete those provisions that would:... (4) prescribe contracting and acquisition practices for the Deepwater program, as these practices would increase the costs of, and add delay to, the Deepwater acquisition process and circumvent review and approval authority of Coast Guard technical authorities.<sup>63</sup>

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<sup>63</sup> Executive Office of the President, Office of Management and Budget, *Statement of Administration Policy, H.R. 2830—Coast Guard Authorization Act of 2008*, April 23, 2008, available online at [<http://www.whitehouse.gov/omb/legislative/sap/110-2/saphr2830-h.pdf>]

## Appendix A. Criticism of Deepwater Management in 2007

### Overall Management of Program

Many observers in 2007 believed the problems experienced in the three Deepwater cutter acquisition efforts were the product of broader problems in the Coast Guard's overall management of the Deepwater program. Reports and testimony in 2007 and prior years from the DHS IG and GAO, as well as a February 2007 DAU "quick look study" requested by the Coast Guard<sup>64</sup> expressed serious concerns about the Coast Guard's overall management of the Deepwater program.

Some observers expressed the view that using a private-sector LSI to implement the Deepwater program made a complex program more complex, and set the stage for waste, fraud, and abuse by effectively outsourcing oversight of the program to the private sector and by creating a conflict of interest for the private sector in executing the program. Other observers, including GAO and the DAU, expressed the view that using a private-sector LSI is a basically valid approach, but that the contract the Coast Guard used to implement the approach for the Deepwater program was flawed in various ways, undermining the Coast Guard's ability to assess contractor performance, control costs, ensure accountability, and conduct general oversight of the program.

Observers raised various issues about the Deepwater contract. Among other things, they expressed concern that the contract was an indefinite delivery, indefinite quantity (ID/IQ) contract, which, they said, can be an inappropriate kind of contract for a program like the Deepwater program. Observers also expressed concern that the contract

- transferred too much authority to the private-sector LSI for defining performance specifications, for subsequently modifying them, and for making technical judgements;
- permitted the private-sector LSI to certify that certain performance goals had been met — so-called self-certification, which, critics argue, can equate to no meaningful certification;
- provided the Coast Guard with insufficient authority over the private-sector LSI for resolving technical disputes between the Coast Guard and the private-sector LSI;
- was vaguely worded with regard to certain operational requirements and technical specifications, reducing the Coast Guard's ability to assess performance and ensure that the program would achieve Coast Guard goals;

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<sup>64</sup> Defense Acquisition University, *Quick Look Study, United States Coast Guard Deepwater Program*, February 2007.

- permitted the firms making up the private-sector LSI to make little use of competition between suppliers in selecting products to be used in the Deepwater program, to tailor requirements to fit their own products, and consequently to rely too much on their own products, as opposed to products available from other manufacturers;
- permitted the private-sector LSI's performance during the first five-year period to be scored in a way that did not sufficiently take into account recent problems in the cutter acquisition efforts;
- permitted award fees and incentive fees (i.e., bonuses) to be paid to the private-sector LSI on the basis of "attitude and effort" rather than successful outcomes; and
- lacked sufficient penalties and exit clauses.

Observers also expressed concern that the Coast Guard did not have enough in-house staff and in-house expertise in areas such as program management, financial management, and system integration to properly oversee and manage an acquisition effort as large and complex as the Deepwater program, and that the Coast Guard did not make sufficient use of the Navy or other third-party, independent sources of technical expertise, advice, and assessments. They also expressed concern that the Coast Guard, in implementing the Deepwater program, placed a higher priority on meeting a schedule as opposed to ensuring performance.

In response to criticisms of the management and execution of the Deepwater program, Coast Guard and industry officials acknowledged certain problems in the program's management and execution and defended the program's management execution in other respects.<sup>65</sup>

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<sup>65</sup> For examples of Coast Guard testimony, see Department of Homeland Security, U.S. Coast Guard, Statement of Admiral Thad W. Allen, Commandant, on Deepwater: 120-Days Later, Before the Subcommittee on Coast Guard & Maritime Transportation, Committee on Transportation & Infrastructure, U.S. House of Representatives, June 12, 2007; and Department of Homeland Security, U.S. Coast Guard, Statement of Rear Admiral Gary T. Blore and Captain Steven Baynes on Deepwater: Charting a Course For Safer Waters, Before the Committee on Homeland Security, U.S. House of Representatives, Subcommittees on Management, Investigations, and Oversight and Border, Maritime and Global Counterterrorism, May 17, 2007.

For examples of industry testimony, see Statement for the Record, Mr. James E. Anton, Vice President Deepwater Program, Northrop Grumman Ship Systems (NGSS), Testimony Before: The House Maritime and Global Counter-Terrorism Subcommittee And The House Management, Investigations and Oversight Subcommittee, May 17, 2007; and Testimony of Fred P. Moosally, President, Lockheed Martin Maritime Systems and Sensors, to The House Committee on Homeland Security Subcommittee on Border, Maritime and Global Counterterrorism, May 17, 2007.

## National Security Cutter (NSC)

A DHS IG report released in January 2007 strongly criticized the NSC program, citing design flaws in the ship and the Coast Guard's decision to start construction of NSCs in spite of early internal notifications about these flaws. The design flaws involved, among other things, areas in the hull with insufficient fatigue life — that is, with insufficient strength to withstand the stresses of at-sea operations for a full 30-year service life. The DHS IG report also noted considerable growth in the cost to build the first two NSCs, and other issues.<sup>66</sup>

Observers in 2007 stated that the Coast Guard failed to report problems about the NSC effort to Congress on a timely basis, resisted efforts by the DHS IG to investigate the NSC effort, and appeared to have altered briefing slides on the NSC effort so as to downplay the design flaws to certain audiences. On May 17, 2007, the DHS IG testified that the Coast Guard's cooperation with the DHS IG had substantially improved (though some issues remained), but that Deepwater contractors had establishing unacceptable conditions for DHS IG to interview contractor personnel about the program.

## 110-Foot Patrol Boat Modernization

The Coast Guard originally planned to modernize and lengthen its 49 existing Island-class 110-foot patrol boats so as to improve their capabilities and extend their lives until their planned eventual replacement with FRCs starting in 2018. The work lengthened the boats to 123 feet. The program consequently is referred to as the 110-foot or 123-foot or 110/123 modernization program.

Eight of the boats were modernized at a total cost of about \$96 million. The first of the eight modernized boats was delivered in March 2004. Structural problems were soon discovered in them. In June 2005, the Coast Guard stopped the modernization effort at eight boats after determining that they lacked capabilities needed for meeting post-9/11 Coast Guard operational requirements.

In August 2006, a former Lockheed engineer posted on the Internet a video alleging four other problems with the 110-foot patrol boat modernization effort.<sup>67</sup> The engineer had previously presented these problems to the DHS IG, and a February 2007 report from the DHS IG confirmed two of the four problems.<sup>68</sup>

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<sup>66</sup> Department of Homeland Security, Office of Inspector General, *Acquisition of the National Security Cutter*, OIG -07-23, January 2007. The report is available online at [[http://www.dhs.gov/xoig/assets/mgmttrpts/OIG\\_07-23\\_Jan07.pdf](http://www.dhs.gov/xoig/assets/mgmttrpts/OIG_07-23_Jan07.pdf)].

<sup>67</sup> Patricia Kime, "Video Alleges Security Problems With Converted U.S. Coast Guard Cutters," *DefenseNews.com*, August 7, 2006. See also Griff Witte, "On YouTube, Charges Of Security Flaws," *Washington Post*, August 29, 2006. The video is posted on the Internet at [<http://www.youtube.com/watch?v=qd3VV8Za04g>].

<sup>68</sup> Department of Homeland Security, Office of Inspector General, *110'/123' Maritime Patrol Boat Modernization Project*, OIG -07-27, January 2007. The report is available online at [[http://www.dhs.gov/xoig/assets/mgmttrpts/OIG\\_07-27\\_Feb07.pdf](http://www.dhs.gov/xoig/assets/mgmttrpts/OIG_07-27_Feb07.pdf)].



On November 30, 2006, the Coast Guard announced that it was suspending operations of the eight modernized boats (which were assigned to Coast Guard Sector Key West, FL) because of the discovery of additional structural damage to their hulls. The suspension prompted expressions of concern that the action could reduce the Coast Guard's border-enforcement capabilities in the Caribbean. The Coast Guard said it was exploring options for addressing operational gaps resulting from the decision.<sup>69</sup>

On April 17, 2007, the Coast Guard announced that it would permanently decommission the eight converted boats and strip them of equipment and components that might be reused on other Coast Guard platforms.<sup>70</sup> The Coast Guard acknowledged in 2007 that the program was a failure.

### **Fast Response Cutter (NSC)**

As a result of the problems in the 110-foot patrol boat modernization project, the Coast Guard accelerated the FRC design and construction effort by 10 years. Problems, however, were discovered in the FRC design. The Coast Guard suspended work on the design in February 2006, and then divided the FRC effort into two classes — the FRC-Bs, which are to be procured in the near term, using an existing patrol boat design (which the Coast Guard calls a “parent craft” design), and the subsequent FRC-As, which are to be based on a fixed version of the new FRC design.

As mentioned earlier, although the November 2006 Deepwater APB calls for 12 FRCs and 46 FRC-Bs, the Coast Guard's Request for Proposals (RFP) for the FRC-B program includes options for building up to 34 FRC-Bs (which, if exercised, would reduce the number of FRC-As to as few as 24). The Coast Guard has also stated that if the FRC-Bs fully meet the requirements for the FRC, all 58 of the FRCs might be built to the FRC-B design.

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<sup>69</sup> “Coast Guard Statement on Suspension of Converted Patrol Boat Operations,” *InsideDefense.com*, November 30, 2006; Patricia Kime, “U.S. Coast Guard Pulls 123s Out of Service,” *DefenseNews.com*, November 30, 2006; Calvin Biesecker, “Coast Guard Suspends 123-Foot Patrol Boat Operations,” *DefenseDaily*, December 1, 2006; Robert Block, “Coast Guard Fleet Cuts Could Hurt Border Patrols,” *Wall Street Journal*, December 1, 2006; Renae Merle, “Coast Guard Finds Flaws In Converted Patrol Boats,” *Washington Post*, December 2, 2006; Renae Merle and Spencer S. Hsu, “Costly Fleet Update Falters,” *Washington Post*, December 8, 2006.

<sup>70</sup> Coast Guard Press Release dated April 17, 2007, entitled “Statement by Adm. Thad Allen on the Converted 123-Foot Patrol Boats and Changes to the Deepwater Acquisition Program.” See also Geoff Fein, “Coast Guard Nixes 123-Foot Patrol Boat, Assumes Lead of Deepwater Effort,” *Defense Daily*, April 18, 2007; Patricia Kime, “Coast Guard To Decommission Troubled 123s,” *NavyTimes.com*, April 18, 2007.

## **Appendix B. Coast Guard Reform Actions in 2007**

### **Actions Announced in April 2007**

On April 17, 2007, the Coast Guard announced six changes intended to reform management of the Deepwater program. In announcing the actions, Admiral Thad Allen, the Commandant of the Coast Guard, stated in part:

Working together with industry, the Coast Guard will make the following six [6] fundamental changes in the management of our Deepwater program:

[1] The Coast Guard will assume the lead role as systems integrator for all Coast Guard Deepwater assets, as well as other major acquisitions as appropriate....

[2] The Coast Guard will take full responsibility for leading the management of all life cycle logistics functions within the Deepwater program under an improved logistics architecture established with the new mission support organization.

[3] The Coast Guard will expand the role of the American Bureau of Shipping, or other third-parties as appropriate, for Deepwater vessels to increase assurances that Deepwater assets are properly designed and constructed in accordance with established standards.

[4] The Coast Guard will work collaboratively with Integrated Coast Guard Systems to identify and implement an expeditious resolution to all outstanding issues regarding the national security cutters.

[5] The Coast Guard will consider placing contract responsibilities for continued production of an asset class on a case-by-case basis directly with the prime vendor consistent with competition requirements if: (1) deemed to be in the best interest of the government and (2) only after we verify lead asset performance with established mission requirements.

[6] Finally, I will meet no less than quarterly with my counterparts from industry until any and all Deepwater program issues are fully adjudicated and resolved. Our next meeting is to be scheduled within a month.

These improvements in program management and oversight going forward will change the course of Deepwater.

By redefining our roles and responsibilities, redefining our relationships with our industry partners, and redefining how we assess the success of government and industry management and performance, the Deepwater program of tomorrow will be fundamentally better than the Deepwater program of today....

As many of you know, I have directed a number of significant organizational changes [to the Coast Guard], embedded within direction and orders, to better prepare the Coast Guard to meet and sustain mission performance long into the

future as we confront a broad range of converging threats and challenges to the safety, security and stewardship of America's vital maritime interests.

What's important to understand here is that these proposed changes in organizational structure, alignment and business processes, intended to make the Coast Guard more adaptive, responsive and accountable, are not separate and distinct from what we have been doing over the past year to improve Deepwater.

In fact, many of these initiatives can be traced directly to challenges we've faced, in part, in our Deepwater program. Consequently, we will be better organized, better trained, and better equipped to manage large, complex acquisitions like Deepwater in the coming days, weeks, months and years as we complete these service-wide enhancements to our mission support systems, specifically our acquisition, financial and logistics functions. That is the future of the Coast Guard, and that is the future of Deepwater.

To be frank, I am tired of looking in the rearview mirror - conducting what has been the equivalent of an archaeological dig into Deepwater. We already understand all too well what has been ailing us within Deepwater in the past five years:

We've relied too much on contractors to do the work of government as a result of tightening AC&I budgets, a dearth of contracting personnel in the federal government, and a loss of focus on critical governmental roles and responsibilities in the management and oversight of the program.

We struggle with balancing the benefits of innovation and technology offered through the private sector against the government's fundamental reliance on robust competition.

Both industry and government have failed to fully understand each other's needs and requirements, all too often resulting in both organizations operating at counter-odds to one another that have benefited neither industry nor government.

And both industry and government have failed to accurately predict and control costs.

While we can — and are — certainly learning from the past, we ought to be about the business of looking forward — with binoculars even — as we seek to see what is out over the horizon so we can better prepare to anticipate challenges and develop solutions with full transparency and accountability. That is the business of government. And it's the same principle that needs to govern business as well.

And it's precisely what I intend to do: with the changes in management and oversight I outlined for you here today, with the changes we are making in the terms and conditions of the Deepwater contract, and with the changes we will make in our acquisition and logistics support systems throughout the Coast Guard. If we do, I have no doubt in my mind that we will exceed all expectations for Deepwater....

The Deepwater program of tomorrow will be fundamentally better than the Deepwater program of today.

The Coast Guard has a long history of demonstrating exceptional stewardship and care of the ships, aircraft and resources provided it by the public, routinely extending the life of our assets far beyond original design specifications to meet the vital maritime safety, security and stewardship needs of the nation....

Knowing that to be the case, I am personally committed to ensuring that our newest ships, aircraft and systems acquired through the Coast Guard's Integrated Deepwater System are capable of meeting our mission requirements from the moment they enter service until they are taken out of service many, many years into the future....

As I've said many times in the past, the safety and security of all Americans depends on a ready and capable Coast Guard, and the Coast Guard depends on our Deepwater program to keep us ready long into the future.

The changes to Deepwater management and oversight I outlined here for you today reflect a significant change in the course of Deepwater. I will vigorously implement these and other changes that may be necessary to ensure that our Coast Guard men and women have the most capable fleet of ships, aircraft and systems they need to do the job I ask them to do each and every day on behalf of the American people.<sup>71</sup>

## **Other Actions Announced in 2007**

The Coast Guard in 2007 also did the following:

- announced a reorganization of certain Coast Guard commands — including the creation of a unified Coast Guard acquisition office — that is intended in part to strengthen the Coast Guard's ability to manage acquisition projects, including the Deepwater program;
- stated that would alter the terms of the Deepwater contract for the 43-month award term that commenced in June 2007 so as to address concerns raised about the current Deepwater contract;
- announced that it intended to procure the 12 FRC-B cutters directly from the manufacturer, rather than through ICGS;
- stated that it was hiring additional people with acquisition experience, so as to strengthen its in-house capability for managing the Deepwater program and other Coast Guard acquisition efforts;
- stated that it concurred with many of the recommendations made in the DHS IG reports, and was moving to implement them;

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<sup>71</sup> Coast Guard Press Release dated April 17, 2007, entitled "Statement by Adm. Thad Allen on the Converted 123-Foot Patrol Boats and Changes to the Deepwater Acquisition Program."

- stated that it was weighing the recommendations of the DAU quick look study; and
- stated that it had also implemented many recommendations regarding Deepwater program management that have been made by GAO.