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BEFORE THE

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SUBCOMMITTEE ON COAST GUARD AND MARITIME TRANSPORTATION

U.S. HOUSE OF REPRESENTATIVES

"DEEPWATER: 120-Day Update"

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## Introduction

Good morning, Chairman Cummings and members of the Subcommittee. I am Richard L. Skinner, Inspector General for the Department of Homeland Security. Thank you for the opportunity to discuss the challenges facing the United States Coast Guard, in particular, its Deepwater Program.

When I last appeared before the Committee, I talked about the many contract and program management challenges and risks associated with the Coast Guard's Deepwater Program and how they continue to affect the modernization, acquisition, and operational capability of key Deepwater assets and systems. These include: the HH-65 helicopter; the 123' patrol boats; the Fast Response Cutter (FRC); the National Security Cutter (NSC); and the upgrades to the Coast Guard's Command, Control, Communication, Computers, Intelligence, Surveillance, and Reconnaissance ($C^4ISR$) system.

My testimony today will address the many ongoing challenges and risks associated with the Deepwater Program and the efforts being taken by the Coast Guard to improve the management and oversight over this very important and complex acquisition initiative. I also will address the actions and challenges associated with the Coast Guard's decision to reorganize its acquisition workforce as outlined in its *Blueprint for Acquisition Reform*.

I want to note that Admiral Allen and his staff have been very responsive to our audit recommendations as well as to our continuous requests for Deepwater-related briefings and document requests. Further, they are implementing sweeping changes to their management of major acquisitions that, when fully-implemented, should mitigate many of the cost, schedule, and performance risks identified with the Deepwater Program. My staff continues to monitor the effectiveness of these corrective actions and to identify emerging risks before they become full-blown problems.

As part of this effort, we recently issued a scorecard summarizing the status of the Deepwater acquisition program, and we continue to closely monitor the situation through regular progress briefings supplemented by one-on-one interviews with Coast Guard officials. These efforts will allow us to keep up-to-date with Coast Guard's efforts to reorganize, expand, and improve the performance of its acquisition management system in general and the Deepwater Program in particular. We plan to produce an annual scorecard on the Deepwater acquisition program, as well as on other key management challenges that exist throughout the Department of Homeland Security.

## Deepwater Program

The Integrated Deepwater System Program (Deepwater) is a $24 billion, 25-year acquisition program designed to replace, modernize, and sustain the Coast Guard's aging and deteriorating fleet of ships and aircraft. The initial Deepwater acquisition strategy provided for private industry to propose and develop an optimal system-of-systems mix of assets, infrastructure, information systems, and people solutions designed to accomplish all of the Coast Guard's Deepwater missions. Private industry was also tasked to provide the assets, the systems integration, integrated logistics support, and the program management.

Under a traditional acquisition strategy, the government would have responsibility for ensuring that sufficient program management support was in place to oversee the administration of the contract.

In June 2002, the Coast Guard awarded Integrated Coast Guard Systems (ICGS) a 5-year contract to serve as the Deepwater systems integrator. ICGS is a joint venture of Northrop Grumman and Lockheed Martin. The 2002 award decision followed a multiyear competitive phase in which two other industry teams vied with ICGS. The current base contract expires in June 2007. The Coast Guard may authorize up to five additional 5-year award terms. In May 2006, the Coast Guard announced its decision to award ICGS an extension of the Deepwater contract for 43 out of a maximum 60 months for the next award term beginning in June 2007.

## Deepwater Program Management and Oversight

We previously identified several common themes and risks in our audits of assets and information technology systems being acquired under the Deepwater contract. These include the dominant influence of expediency, unfavorable contract terms and conditions, poorly defined performance requirements, and inadequate management and technical oversight. These deficiencies contributed to schedule delays, cost increases, and asset designs that did not meet minimum Deepwater performance requirements.

Systems Integrator Approach. The Coast Guard's decision to outsource program management to the systems integrator fully empowered the contractor with authority to make day-to-day decisions regarding all aspects of the contract. According to the Coast Guard, its acquisition workforce did not have the requisite training, experience, and certification to manage an acquisition the size, scope, and complexity of the Deepwater Program. Further, the Coast Guard was reluctant to exercise a sufficient degree of authority to influence the design and production of its own assets. As a result, ICGS assumed full technical authority over all asset design and configuration decisions while the Coast Guard's technical role was limited to that of an expert "advisor."

Furthermore, there is no contractual requirement that the Systems Integrator accept or act upon the Coast Guard's technical advice, regardless of its proven validity. There are also no contract provisions ensuring government involvement into subcontract management and "make or buy" decisions. The Systems Integrator decides who is the source of the supply. The effectiveness of the contractor-led Integrated Product teams (IPTs), which were originally intended to be the vehicle for managing the Deepwater Program and resolving Coast Guard's technical concerns, has been called into question by the General Accountability Office and my office.

Contractor Accountability. Our reviews have raised concerns about the definition and clarity of operational requirements, contract requirements, performance specifications, and contractual obligations. For example, in our National Security Cutter (NSC) report, we reported that the Coast Guard and the American Bureau of Shipping jointly developed standards that would govern the design, construction, and certification of all cutters acquired under the Deepwater Program. These standards were intended to ensure that

competing industry teams developed proposals that met the Coast Guard's unique performance requirements. Prior to the Phase 2 contract award, the Coast Guard provided these design standards to the competing industry teams. Based on industry feedback, the Coast Guard converted the majority of the standards (85% of the 1,175 standards) to guidance and permitted the industry teams to select their own alternative standards without a contractual mechanism in place to ensure that those alternative standards met or exceeded the original guidance standards. The competing teams were allowed to select cutter design criteria.

Additionally, the Deepwater contract gave the Systems Integrator the authority to make all asset design and configuration decisions necessary to meet system performance requirements. This allowed ICGS to deviate significantly from a set of cutter design standards originally developed to support the Coast Guard's unique mission requirements, and permitted ICGS to self-certify compliance with those design standards. As a result, the Coast Guard gave ICGS wide latitude to develop and validate the design of its Deepwater cutters, including the NSC.

Deepwater Performance Requirements Are Ill-Defined. Vague contract terms and conditions have also compromised the Coast Guard's ability to hold the contractor accountable by making possible competing interpretations of key performance requirements. For example, the performance specifications associated with upgrading the information systems on the Coast Guard's 123' patrol boat fleet did not have a clearly defined expected level of performance. Also, in our review of the Helicopter Interdiction Tactical Squadron (HITRON) lease, we determined that vague contract performance requirements inhibited the Coast Guard's ability to assess contractor performance. In another example, the performance specifications for the NSC were not clearly defined, which resulted in disagreements, both within the Coast Guard and between the Coast Guard and ICGS, regarding the intent behind the cutter performance requirements.

Deepwater Cost Increases. The cost of NSCs 1 and 2 are expected to increase well beyond the current $775 million estimate, as this figure does not include a $302 million Request for Equitable Adjustment (REA) submitted to the Coast Guard by ICGS on November 21, 2005. The REA represents ICGS's repricing of all work associated with the production and deployment of NSCs 1 and 2, which was caused by adjustments to the cutters' respective implementation schedules as of January 31, 2005. The Coast Guard and ICGS are currently engaged in negotiations over the final cost of this REA. ICGS has also indicated its intention to submit additional REAs for adjusted work schedules affecting future NSCs, including the additional cost of delays caused by Hurricane Katrina.

Additionally, the $775 million cost estimate for NSCs 1 and 2 does not include the cost of structural modifications to be made to mitigate known design deficiencies. The cost of these modifications and the cost of future REAs could add hundreds of millions of dollars to the total NSC acquisition cost. We remain concerned that these and other cost increases within the Deepwater Program could result in the Coast Guard acquiring fewer and less capable NSCs, FRCs, and Offshore Patrol Cutters (OPCs) under the Deepwater contract.

## Impact on Coast Guard Operational Capabilities—Short and Long Term

The problems with the Deepwater Program are also affecting the Coast Guard's ability to perform Homeland Security and legacy missions. For example, while the re-engining of the HH-65B helicopters resulted in aircraft with significantly improved capabilities, the program has experienced schedule delays and cost increases. As a result, the 84th HH-65C was delivered during May 2007, 11 months beyond the Commandant's original July 2006 deadline. Extending the delivery schedule exposed HH-65B aircrews to risk due to the increased rate of which in-flight loss of power mishaps were occurring.

There are also problems with Coast Guard's acquisition of the Vertical Unmanned Aerial Vehicle (VUAV). VUAVs have the potential to provide the Coast Guard's flight deck equipped cutters with expanded air surveillance, detection, classification, and identification capabilities. Currently, the VUAV acquisition is over budget and more than 12 months behind schedule. On May 8, 2007, the Coast Guard issued a second 90-day stop work order and the Commandant recently testified that the VUAV was under review by Coast Guard's Research and Development Center. The review is expected to provide recommendations for the way ahead with the VUAV.

Not having VUAV capability would significantly reduce the long-range surveillance capability of the NSC and the Offshore Patrol Cutter (OPC) from 58,000 square nautical miles with the VUAV to that of the Coast Guard's Hamilton class high endurance cutters (13,500 square nautical miles). This represents a 76% reduction in Deepwater surveillance capability. The Coast Guard's Revised Deepwater Implementation Plan of 2005 called for the acquisition of 45 VUAVs at a total cost of approximately $500 million. As of March 31, 2007, the Coast Guard had obligated $114 million (77%) of the $148 million allocated to the project for FY 2007, with very little to show for it. According to the Coast Guard estimates, it would take an additional $50 million and 18 months to deliver the first two VUAV systems. However, the Coast Guard's FY 2008 budget submission does not include VUAV funding through FY 2012.

Another issue that will affect the operational capability of the NSC is the delay associated with the system development and installation of the helicopter Aircraft Ship Integrated Secure and Traverse (ASIST) system modifications to the HH-65C fleet. The purpose of the ASIST system is to improve the efficiency and safety associated with the landing and stowage of helicopters to be deployed from the NSC and OPC. According to the Coast Guard, it will take 18 to 24 months and $7.5 million to complete the non-recurring engineering for system integration, followed by the installation of the system aboard two HH-65Cs. To date, the funding for developing and installing the ASIST has not been made available to the Coast Guard's Aviation Repair and Supply Center which is responsible for the installing the system aboard the HH-65C. As a result, the Coast Guard may have difficulty testing the interoperability of the ship systems with the HH-65 helicopters when the NSC undergoes builder sea trials (fall of 2007) and operational test and evaluation trials (fall of 2008).

The increased cost, schedule delays, and structural design problems associated with the 123' patrol boat and FRC are also affecting the Coast Guard's ability to close its maritime

patrol boat operational hour and capability gap. This is particularly true in the Key West area of operations where the eight 123' patrol boats had originally been stationed. To its credit, the Coast Guard is doing what it can to mitigate the problem by extending an agreement with the U.S. Navy to continue the operation of three of the five 179' "Cyclone" class patrol boats currently on loan to the Coast Guard from FY 2009 through FY 2011. The Coast Guard is also extending the operational capability of the 110-foot Island Class fleet through service life extension programs, shifting assets (87' patrol boats and buoy tenders) from other districts to the South Florida area, and multi-crewing eight 110s already located in South Florida. While the increased operations tempo will help in the short-term, it has a ripple effect in that it increases the workload of personnel and assets assigned to take the place of 87' patrol boats and buoy tenders sent to South Florida. It also increases the wear and tear on the 87' and 110' patrol boats. Further, the use of multiple crews is a double-edged sword insofar as the increased operational capability comes at the expense of vessel maintenance and crew training. Over time, this could lead to an increase in the number of engineering casualties and crew accidents that could negatively affect the operational readiness of the 87' and 110' patrol boat fleets. For these reasons, we expect the maritime patrol boat gap, which the Coast Guard has reported to be in excess of 20,000 hours, to increase rather than decrease until the service life extensions on the110' patrol boats are completed and a significant number of FRCs are constructed and deployed. This is not expected to occur before FY 2013.

## Recent OIG Reports

Over the past 2 years, my office has issued reports on various assets being acquired under the Deepwater contract including:

- The reengining of the HH-65B helicopter fleet;
- The acquisition and implementation of Deepwater $C^4$ISR systems;
- The acquisition of the national security cutter; and
- The modernization of the 110'/123' patrol boat fleet.

We identified serious cost, schedule, performance, and management oversight issues with each of the aforementioned Deepwater projects.

Re-engining of the HH-65B. We reviewed the Coast Guard's HH-65 Dolphin helicopter re-engining project. The review was initiated in response to concerns that the re-engining requirements specified for the HH-65 helicopter were not sufficient for the needs of the Coast Guard over the Deepwater project timeframe. Specifically, the HH-65 was experiencing a sharp increase in the number of in-flight loss of power mishaps that jeopardized the safety of HH-65 flight crews. We also identified concerns that the ICGS proposal did not meet the Commandant's mandate to have 84 HH-65s re-engined by July 2006.

Our review of the HH-65 re-engining project determined that the replacement of the HH-65 engines with the Ariel 2C2 engine would resolve the safety and reliability issues that had

plagued the HH-65 fleet for much of the past decade. Our report also determined that it would be timelier and more cost-effective to have the re-engining performed at the Coast Guard Aircraft and Repair Supply Center rather than to have responsibility for the re-engining placed under the auspices of ICGS. The Coast Guard's Assistant Commandant for Operations made a similar recommendation in May 2004.

The Coast Guard did not concur with any of our HH-65 recommendations. Coast Guard officials said that ICGS minimized the operational, legal, cost, and contract performance risks associated with the re-engining. The Coast Guard also said it believed that it received significant benefits from the current ICGS contract that far outweighed the benefits of having Coast Guard aviation manage the project. We did not and do not believe that these benefits have been demonstrated. To date, 84 re-engined HH-65s have been delivered to the Coast Guard.[1] The remaining 11 HH-65 helicopters are to be delivered to the Coast Guard by the end of FY 2007. As of March 31, 2007, the Coast Guard had obligated $324 million (94.4%) of the $343 million funded for the project of which at least $46 million (16%) in administrative expense and fees are estimated to have been paid to ICGS and Lockheed Martin.

C$^4$ISR Systems Review. We also reviewed the Coast Guard's efforts to design and implement C$^4$ISR systems to support the Deepwater Program. We determined that the Coast Guard had limited influence over contractor decisions on meeting information technology requirements. The lack of discipline in change management processes provided little assurance that the requirements remain up-to-date or effective in meeting program goals. Certification and accreditation of Deepwater C$^4$ISR equipment was difficult to obtain, placing systems security and operations at risk. Further, although the Deepwater Program had established information technology testing procedures, the contractor did not follow them consistently to ensure the C$^4$ISR systems and the assets on which they are installed performed effectively.

Recently, the Coast Guard provided an update regarding the progress being made to implement the recommendations contained in our report on C$^4$ISR systems. In its response, the Coast Guard stated that the language contained in the Deepwater contract, including the contract's "award term" criteria, will be revised to further clarify contractor responsibilities for developing Deepwater C$^4$ISR systems.

NSC Review. We also conducted a review of the Coast Guard's acquisition of the NSC to determine the extent to which the cutter will meet the cost, schedule, and performance requirements contained in the Deepwater contract. We determined that the NSC costs have significantly increased and, as designed and constructed, will not meet performance specifications described in the original Deepwater contract. Specifically, the NSC's hull structure provides insufficient fatigue strength to achieve a 30-year service life under Caribbean (General Atlantic) and Gulf of Alaska (North Pacific) sea conditions.
To mitigate the effects of these deficiencies, the Coast Guard has advised us that it intends to modify the NSC's design to meet the service and fatigue life requirements specified in

[1] Seventy-two of the 84 HH-65s re-engined to date (86%) were modified in-house by the Coast Guard's Aircraft Repair and Supply Center (ARSC).

the contract. However, this decision was made after the Coast Guard authorized production of two of the eight being procured.

NSC 1 was christened on November 11, 2006, and final delivery to the Coast Guard is scheduled for January 2008. NSC 2 is under construction and scheduled for delivery during the summer of 2009. As of March 31, 2007, the Coast Guard had obligated $769.6 million (50.6%) of the $1,519.7 million funded for the project.

We recommended that the Coast Guard ensure the NSC is capable of fulfilling all performance requirements outlined in the Deepwater contract and improve the level of Coast Guard technical oversight and accountability. The Coast Guard has gone on record, including testimony before Congress, on its agreement with our audit recommendations and the need for change. It has also identified aggressive actions to address the concerns identified in our report. However, the Coast Guard's written responses to our report excluded important details of its corrective actions. For example, the Coast Guard's 90-day response to our NSC report did not include a detailed plan with timelines, reporting requirements, milestones, responsible parties, and cost estimates for the structural modifications. In addition, the response did not specify whether the Engineering Change Proposals, prepared by the Coast Guard and ICGS to address the structural design and performance issues associated with the NSC, would be fully evaluated by an independent, qualified third party, such as U.S. Navy's Surface Warfare Center - Carderock Division.

We are also concerned that the Coast Guard may have difficulty resolving the structural design and performance issues associated with NSCs 1 and 2. For example, the Coast Guard stated that it plans to go ahead with construction of NSCs 3 through 8 before it determines the extent and cost of the structural modifications needed to enable NSCs 1 and 2 meet the fatigue life and performance requirements outlined in the Deepwater contract. Consequently, there is a possibility that the required changes to all eight NSCs could be cost prohibitive or result in a reduction in operational capability. The number, type, scope, and cost of all structural modifications to be made to NSCs 1 and 2 need to be identified and evaluated *before* the Coast Guard authorizes construction of NSCs 3 through 8.

<u>110'/123' OIG Hotline Allegation</u>. In response to an OIG Hotline allegation, we reviewed certain deliverables under the Coast Guard's 110'/123' Island Class patrol boats (123' patrol boats). We determined that low-smoke cabling was not installed and that there were numerous instances where the contractor installed $C^4$ISR equipment aboard the 123' patrol boats and short-range prosecutors that did not meet the design standards set forth in the Deepwater contract.

We raised many concerns about the Coast Guard's program and technical oversight of the Deepwater contractor responsible for the 110′/123′ Patrol boat Modernization Project. For example, the contractor purchased and installed hundreds of non-low-smoke cables prior to the Coast Guard's approval of the Request for Deviation. In effect, the Coast Guard accepted delivery and operated four 123' patrol boats without knowing the extent of the hazards associated with the use of the non-low-smoke cabling. The contractor also purchased and installed hundreds of $C^4$ISR topside components aboard the 123' patrol boats

and short range prosecutors knowing that they either did not meet contract performance requirements, or compliance with the requirements had not been verified. For these reasons, we are concerned that similar performance issues could affect the operational effectiveness of $C^4$ISR system upgrades recently installed aboard its legacy fleet of cutters.

We recommended that the Coast Guard investigate and address the low-smoke cabling and environmental issues associated with the equipment installation, and take steps to prevent similar technical oversight issues from affecting the remaining assets to be modernized, upgraded, or acquired through the Deepwater Program. The Coast Guard concurred with our recommendations, and said it is in the process of implementing corrective measures. Subsequent to our review, and for reasons unrelated to the issues identified during our inquiry, the 123' patrol boat fleet has been withdrawn from service and will be formally decommissioned.

## Coast Guard's "Way Forward" - Blueprint for Acquisition Reform

The Coast Guard recognizes that urgent and immediate changes are needed to meet the management challenges facing its Deepwater Program. As part of its endeavors to improve the Deepwater Program, the Coast Guard recently issued its *Blueprint for Acquisition Reform* (Blueprint), which catalogues many of the aforementioned challenges and risks that have impeded the efficient execution of the Deepwater contract. According to the Coast Guard, implementing this Blueprint will enhance its ability to execute asset-based, "traditional" acquisition projects, effectively use a governmental or commercial entity as a systems integrator for complex acquisitions, and execute minor acquisitions contracts for goods and services.

According to the Coast Guard, the Blueprint outlines its plans for reorganizing and rebuilding its acquisition workforce. Specifically, the Blueprint calls for:

- Consolidation of all Coast Guard acquisition functions under one directorate;
- Reassertion of the Coast Guard's technical authority;
- Use of independent, third-party assessments; and,
- Redefinition of the contract terms and conditions.

While the Blueprint contains a number of key initiatives, the Coast Guard should adopt measures of performance or desired outcomes that would enable it to assess the progress being made. These include the specific numbers and types of acquisition professionals needed, when they are scheduled to arrive onboard, and the financial cost associated with the realignment, reorganization, retraining, and rebuilding of its acquisition workforce.

The Coast Guard is beginning to take aggressive action to resolve some of the management oversight issues identified in our reports. For example, it is significantly increasing staffing levels at headquarters and at its Program Management Review Office in Pascagoula, Mississippi, to enable them to increase its scrutiny of contractor requests for deviation and waivers to the NSC. To improve the effectiveness of the Deepwater IPTs, the Coast Guard

is assuming the role of IPT chairs, and the IPT charters are being reviewed to determine where changes need to be made. The Coast Guard is also expanding its acquisition training and certification process, and working with the Department of Defense to ensure that technical support staff, program managers, and contracting officers have the requisite skills, education, and experience to manage complex acquisitions.

The Coast Guard will stand up its Acquisitions Directorate on July 13, 2007. Should all go as planned, the Coast Guard's efforts to reorganize and expand the level of technical and management oversight over the Deepwater Program will be fully implemented during FY 2010. In the meantime, the Coast Guard is planning to move ahead with the second phase of the Deepwater contract with Award Term I, which will entail the estimated expenditure of more than $3 billion over a 43-month period starting during June 2007.

## Conclusion

We are encouraged that the Coast Guard recognizes these challenges and is beginning to take aggressive action to strengthen program management and oversight—such as technical authority designation; use of independent, third-party assessments; consolidation of acquisition activities under one directorate; and redefinition of the contract terms and conditions, including award fee criteria. Furthermore, the Coast Guard is beginning to implement its plan to increase its staffing for the Deepwater Program, and to reinvigorate its acquisition training and certification processes to ensure that staff has the requisite skills and education to manage the program.

These steps should improve the Coast Guard's ability to oversee major acquisitions. However, the Coast Guard's system-of-systems approach will require the highest levels of planning and coordination to mitigate cost overruns, schedule delays, asset performance shortcomings, or potential operational gaps due to delays in asset acquisition. Most importantly, there is considerable risk associated with the Coast Guard assuming the lead systems integrator role at this time without having fully implemented its *Blueprint for Acquisition Reform*. In particular, the Deepwater Program needs to overcome its human capital gap. The Coast Guard needs to exercise caution and take a slower or phased approach to assuming the systems integrator role.

In conclusion, we remain committed to the oversight of the Deepwater Program and other major acquisitions within the department. We will continue to work with the Coast Guard to identify milestones and due dates to assess the most appropriate cycle for reporting the program's progress. When fully-implemented, the Coast Guard's steps should significantly increase its level of management oversight over the air, surface, and $C^4$ISR assets that are acquired or modernized under the Deepwater Program. We look forward to working closely with the Coast Guard to continue the improvement of the efficiency, effectiveness, and economy of the Deepwater Program.

Chairman Cummings and members of the Subcommittee, this concludes my prepared remarks. I would be happy to answer any questions that you may have.