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Introduction

Thank you for the opportunity to explain the progress we are achieving on the U.S. Coast Guard's Integrated Deepwater System program. We are part of a team accomplishing important work for the nation and we are deeply grateful for your continuing support as the safety of our nation depends on this critical program. Each of us, in accomplishing our daily tasks on the program, has a deep sense of the importance of achieving the very best for the Coast Guard and our nation.

Overview

The capabilities we are providing to the Coast Guard through the Integrated Deepwater System are already enabling US operational forces to perform more effectively, providing increased operational readiness, enhanced mission performance and safer working environment. Recent customer statements show how well the upgrades, equipment and new capabilities are being received:

- HH-65 Helicopter Re-Engining - "Restoring this kind of reliability and stability to our HH-65 fleet is a crucial milestone in improving readiness. The fact that it's being accomplished ahead of schedule reflects a true team effort by industry and our engineers, acquirers and operators."
- Legacy Cutter C4ISR Upgrades – "The Deepwater Upgrade provides vastly improved communications and interoperability. In the past year this ship has operated from above the Arctic Circle to well below the equator. We have enjoyed 24/7 real time links to operational commanders and data base management regardless of our physical location. The upgrades have proven to be tough, dependable, and easily maintained."
- National Security Cutter C4ISR Training Center - "The contrast between our tools of 1983, and the tools of the future ships like the BERTHOLF is significant. I remember analog radar, message traffic by teletype, paper charts and maneuvering boards, Polaroid cameras, and slow criminal history checks by EPIC. No cell phones, no email – imagine that. I remember a true sense of independent operations. We were proud, but probably not as effective as we might have been if we had the tools of today. By contrast, our new National Security cutters will train ... on computerized digital sensors, radar and charts, live sharable digital video, message traffic by PC, voice communications with anyone, clear or secure, and real time criminal histories and intelligence checks. They will benefit from a sense of connectedness and systemic information sharing making their days at sea safer and more efficient. The CG

will have increased Maritime Domain Awareness to identify threats, and a Common Operating Picture to act when necessary – all to protect our coastlines and our citizens."

- Maritime Patrol Aircraft - "Today's delivery of the first MRS MPA is a critical milestone in our ongoing efforts to acquire and deliver more capable and interoperable assets and systems to our Coast Guard crews. When this aircraft and others like it enter operational service, they will help to narrow our existing gaps in maritime surveillance in many important ways."

The Deepwater program, which was recently expanded to account for post-9/11 requirements, is delivering and is making a real difference — impacting drug seizures and migrant interdictions and saving lives. At the same time, we understand the Integrated Deepwater System will continue to evolve. To meet this ongoing challenge, Lockheed Martin is applying a disciplined system engineering approach to the program. This will continue to be vital for achieving more robust capabilities given fiscal realities – a one-asset-at-a-time recapitalization approach would be unaffordable. Lockheed Martin is committed to providing our best talent and capabilities for supporting the Coast Guard.

Lockheed Martin is primarily responsible for four Deepwater domains: System Engineering & Integration, C4ISR (the command and control network), Logistics and Aviation (refurbishment of existing assets and production of new assets). We believe maintaining emphasis on the implementation of the Deepwater system-wide command and control network. C4ISR (Command & Control, Computers, Communications, Intelligence, Surveillance and Reconnaissance) is very important. This is the network "glue" that permits various assets including ships, aircraft and shore stations to work together to more effectively and efficiently achieve a common purpose.

Key Achievements

We are making good progress and are delivering significant new and upgraded capabilities. At the same time, we recognize the system level effects of networking are essential to achieving the level of mission performance needed by the Coast Guard. Lockheed Martin is accomplishing high rates of software re-use as well as system commonality and integration by the rigorous application of proven system engineering processes and capabilities. In addition, we are managing implementation of support systems for all Deepwater program domains. The Lockheed Martin team is working closely with our Integrated Coast Guard Systems, LLC (ICGS) joint venture partner, Northrop Grumman, to ensure that electronic equipment developed and produced under the cognizance of the C4ISR domain is appropriately configured for installation on the ships.

Deepwater C4ISR is the enabler for the integrated system and is the major contributor to improved performance. It permits the Coast Guard to operate effectively with DoD, DHS, state and local government agencies. C4ISR establishes the ability to achieve mission success as it provides coordinated tactics, integrated intelligence, multi-agency interoperability and common situational awareness necessary to fulfill the missions with the currently planned force mix. These capabilities are needed for all Deepwater assets including ships, aircraft, and shore site command centers. C4ISR is being introduced to the fleet in three phases.

Every one of the Coast Guard's 12 high-endurance and 27 medium-endurance cutters have received phase one and two command and control system upgrades – giving the fleet markedly improved capability to seize drugs, interdict migrants and save lives. As for shore sites, there are a total of 12 on contract to receive upgrades: two Communication Area Master Stations, eight Districts, one Sector and Headquarters.

Use and reuse of Commercial-Off-The-Shelf, Government-Off-The Shelf and fielded maritime systems are being maximized for commonality and interoperability. The application of off-the-shelf software permits Deepwater to take advantage of the rapid changes in the commercial market place and the investments which commercial firms make in their best of class technologies. This will facilitate Coast Guard interoperability with civil and international systems, a key consideration given their mission mix. The National Security Cutter is using 75 percent of the U.S. Navy's Open Architecture Command & Decision System. The Command & Control System for Maritime Patrol Aircraft employs more than 50 percent of the functionality of the Navy's P-3 Anti-Surface Warfare Improvement Program. The Operations Center consoles on the National Security Cutter utilize more than 70 percent of the design of the Navy's UYQ-70 display systems. Use and reuse of available software and systems is the key to commonality. In addition, this approach takes greatest advantage of the work undertaken with the Navy to establish the best Human System Interface including workspace ergonomics, viewing characteristics, input devices and overall system architecture.

The common architecture deployed across multiple types of assets allows for commonality of equipment and software systems and supportability of the entire Deepwater system. In general, the Deepwater C4ISR architecture ensures an open systems approach for design and implementation, providing a true 'web enabled" infrastructure. The Deepwater architecture adapts to technology insertion and enables the progression to future Coast Guard wide C4ISR architectures. In ports and coastal areas, one of Deepwater's most significant capability enhancements will be its robust C4ISR system. It is a fundamental building block in improving the Coast Guard's ability to maintain maritime domain awareness focused on meeting the needs of decision makers engaged in operations at sea, ashore, and in the air. The network-wide system is being designed to ensure the Coast Guard will possess and maintain seamless interoperability with the forces and agencies of the Department of Homeland Security, the Department of Defense, and other federal and regional agencies—a true force multiplier in the fullest sense. Similarly, the Logistics Information Management System (LIMS) will centralize access logistics processes for Deepwater logistics consumers and providers. LIMS will automatically collect and process logistics data so that embedded decision support tools can be used to project support requirements and trends and provide readiness assessments instantly to operational commanders. With its ability to bring the right information to the right people at the right time, LIMS is expected to provide the backbone and software applications necessary to make Deepwater's vision of network-centric logistics a reality.

Processes

It is important to note how the Deepwater technical approval process operates. As a design matures, it goes through a full set of formal technical review steps – preliminary design review (PDR), critical design review (CDR), test readiness review (TRR), and production readiness

review (PRR) are the main features of the process. At each of these reviews a full complement of government and industry representatives is present. ICGS makes recommendations to the Coast Guard and presents data that confirms how the design achieves all conditions for current step in the process and how it is ready to progress to the next step in the process. The Coast Guard decides and approves or disapproves progressing to the next step in the process. This process has been in place since inception of the program and enables the Coast Guard to decide the technical maturity of all designs.

Off-the-shelf, ruggedized maritime systems were selected for the C4ISR system in accordance with the Coast Guard Cutter Certification Matrix (CCM). The CCM did not require equipment designed and tested to full U.S. Navy military standards and performance specifications (MIL-STDs and MIL-SPECs). We have a long and wide-ranging experience in delivering and maintaining high performance combat systems to the U.S. Navy and allied navies. As such, we believe that extensive testing of off-the-shelf, ruggedized maritime equipment to determine the level of compliance to U.S. Navy military standards and performance specifications would not provide any significant operational benefits to the Coast Guard and would have defeated the benefits of off-the-shelf, ruggedized maritime systems. As such, a recent IG report included a recommendation for the Coast Guard to develop and implement a plan to improve the process for reviewing and adjudicating contractor Requests for Deviations/Waivers (RFD/RFW). We are fully supporting the Coast Guard in this effort. The RFD/RFW process permits the customer to make an informed decision regarding cost-effectiveness and safety considerations. It is not a step of convenience for the contractor. It is a responsible way to allow the customer to make important tradeoffs subject to its own criteria and requirements. The IG further concluded that the plan should ensure that all waiver requests are resolved prior to implementation and that the rationale underlying these decisions is formally documented. It is our understanding that the Coast Guard is in the process of implementing appropriate contractual and program management oversight process improvements.

Industry's performance has been closely supervised by the Coast Guard. All designs and improvements are based on trade studies, analyses, and technical considerations. The Coast Guard is the decision maker and contracting authority and all major acquisition decisions are reviewed and approved by Coast Guard senior leadership. The Deepwater program uses the depth of capabilities and experience of its industry partners to provide solutions in accordance with Coast Guard requirements. The results so far indicate that Deepwater has made a difference in the effectiveness of the Coast Guard with regard to the numbers of drug seizures, migrant interdictions and lives saved.

The Way Ahead

Our overarching goal is to provide more capability to the fleet, sooner. We are dedicated to analyzing and recommending approaches for maximizing the value delivered to the Coast Guard, in accordance with the customer's view of value, not that of industry. This requires the best talent from each corporation. ICGS works closely with Coast Guard personnel to assure constant communications and improved working relationships. The strategic policy changes that have occurred since 9/11 must be factored into problem solving. The Coast Guard and the Department of Homeland Security have needs that can be satisfied by the Deepwater program and its

approach to value delivery. The way forward will be difficult, but given the capabilities of the participants and the strategic imperative to better outfit our Coast Guard so the safety and security of our nation is improved, the Deepwater program is eminently achievable.

Thank you again for the opportunity to present and explain the progress we are achieving on the Deepwater program.