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Littoral Combat Ship (LCS)

"The Littoral Combat Ship program remains of critical importance to our Navy. With its great speed and interchangeable warfighting modules, the ship will provide unprecedented flexibility."

— Admiral Mike Mullen, CNO, 12 January 2007

LCS... A vital asset

- Fast, agile, mission-focused platform designed to operate in near-shore environments, yet capable of open-ocean operation.
- Designed to defeat asymmetric "anti-access" threats such as mines, quiet diesel submarines and swarming boats.
- Modular design allows LCS to be tailored specifically for the mission at hand -- flexible solutions to deliver needed capabilities to evolving threats.
- Mission modules currently under development include mine warfare, littoral anti-submarine warfare and surface warfare.

Background

- Navy identified significant cost increases with the lead ship (Lockheed Martin (LM) variant) of the Littoral Combat Ship program.
- RD&A established a Program Management Assessment Group (PMAG) to conduct a **review of cost growth** associated with LCS 1, and to review projected costs for LCS 2 and LCS 4.
- Navy evaluated the overall performance of the program, working closely with the contractor to address cost overruns and root causes.
- The PMAG will determine the root causes of cost growth and propose recommendations.

Specific Talking Points

- Current estimates significantly exceed the program estimate for detail design and construction of the lead ship, LCS 1.
- **Navy is committed to cost control.** Navy stopped work on LCS 3 for 90 days while conducting a thorough review of the program, and to determine to what extent cost increases on the lead ship are recurring.
- Operational requirements have remained unchanged since the program's inception though the Navy recognized that Naval Vessel Rules (NVR) could impact cost growth and negotiated NVR cost increases with both contractors early in the process.
- **Initial Root Causes** for LCS cost growth:
 - Pressure to build to schedule was strongly emphasized; pressure sought relief through cost growth.
 - Schedule relied upon an ambitious degree of concurrent design and construction that was not achieved.
 - For LCS 1, the proximity of LM's bid to the development of NVR resulted in underestimated efforts for design and construction by the contractor.
 - Competitive environment created disincentive for the contractor to raise concerns.
 - Navy program reluctance to raise cost performance concerns resulted in a lack of transparency.
- **Preliminary Recommendations:**
 - Improve timing and staffing levels of on-site government oversight (SUPSHIP) to match construction schedule.
 - Examine manning levels in program office and in NAVSEA offices supporting program.
 - Assign the most experienced people in program management to its highest risk programs.
 - Conduct formal independent cost estimates before exercising future options or contracts in LCS.
 - Incorporate risk mitigation strategies when shipbuilding contracts drive high design/construction concurrency.
 - ASN(RD&A) issue guidance highlighting critical program management functions and emphasizing chain of command notification of adverse news in high risk programs.

Mission Packages

- Modular Open Systems Architecture
- Flexibility, versatility and rapid response
- Three Flight 0 Mission Module Packages
 - **Mine Warfare**
 - To hunt, identify, localize and neutralize mines.
 - **Littoral Anti-Submarine Warfare**
 - To detect, track and engage small boats.
 - **Littoral Surface Warfare**
 - To search, detect, localize and neutralize quiet diesel electric submarines operating in shallow water.

Facts & Stats

- High Speed, shallow draft assures access to the littorals
 - Capable of 40 to 50 knots
 - Draft less than 20 feet
- Less than 50 Sailors (ship's crew) plus mission module crews
- 55 LCS support the 313 future Naval force structure
- Engineering:
 - Combined gas turbine (2) and diesel (2) engines with steerable water jets
 - 4 diesel generators