

Tomahawk Missile and Weapon System

Executive Summary

- The Navy continues to conduct Operational Test Launches to verify reliability and performance of fielded Block III and IV Tomahawk missiles, their associated weapon control systems, and the Tomahawk Command and Control System (TC2S). DOT&E considers the planned Operational Test Launch program to be adequate for continued verification of system reliability and accuracy.
- Based on FY11 test flights, the Tomahawk Weapon System continues to meet Navy standards for reliability and performance.
- Based on the FY11 FOT&E Operational Test Launch results, the Tomahawk Weapon System continues to be effective and suitable.

System

- The Tomahawk Land Attack Missile is a long-range, land-attack cruise missile designed for launch from submarines and surface ships.
- Production of Tomahawk Block II and III missiles is complete. There are three fielded variants: a nuclear warhead (Block II only, not deployed), a conventional warhead, and a conventional warhead with submunitions.
- Tactical Tomahawk (Block IV) is in production as the follow-on to the Block III conventional warhead variant. These missiles are produced at lower cost and provide added capability, including the ability to communicate with and retarget the missile during flight.
- The Tomahawk Weapon System also includes the Tomahawk Command and Control System (TC2S) and the shipboard

Activity

- DOT&E approved the operational test plan for the operational test IT-CF test phase.
- The Navy completed the IT-CF test phase in accordance with the DOT&E-approved test plan. This phase of test evaluated upgrades to the TWCS for surface ships.
- The Navy continued to conduct FOT&E Operational Test Launches to verify reliability and performance of fielded Block III and IV Tomahawk missiles, their associated weapon control systems, and the TC2S. The Navy conducted a total of nine Tomahawk missile test launches in FY11.
- DOT&E continues its participation in the Tomahawk program's T&E Working Integrated Product Team to update the Test and Evaluation Master Plan and develop test plans to support the next phases of Tomahawk Weapon System FOT&E (OT-IIIIG and OT-IIIIH). These phases include



Tomahawk Weapon Control Systems (TWCS). The TC2S and TWCS provide for targeting, mission planning, distribution of Tomahawk tactical data, and in-flight control of Block IV missiles.

Mission

The Joint Force Commander employs the Tomahawk Weapon System for long-range, precision strikes against land targets.

Major Contractor

Raytheon Missile Systems – Tucson, Arizona

improvements to TWCS, as well as correction of deficiencies remaining from OT-IIIE.

Assessment

- As demonstrated during FY11 test flights, the Tomahawk Weapon System continues to meet Navy standards for reliability and performance. As demonstrated by the FY11 FOT&E results, the Tomahawk Weapon System continues to be effective and suitable.
- DOT&E considers the current Operational Test Launch program for all Tomahawk missile variants to be adequate for continued verification of system reliability and accuracy. However, while Block IV testing is funded through FY13, the Navy has not funded Block III test launches after FY11. The Block III missiles are to remain in operational use until 2020.

NAVY PROGRAMS

DOT&E places high value on continuing to collect flight data to evaluate end-to-end system performance and reliability for all deployed and deployable Tomahawk missile variants.

- Based on IT-CF results, hardware and software updates to the TWCS provided accelerated mission planning and execution from firing units in surface vessels. However, particular tasks, such as post-launch retargeting of missiles from the firing unit, continue to be problematic.

Recommendations

- Status of Previous Recommendations. The Navy has addressed all previous recommendations.
- FY11 Recommendations. None.