

Tomahawk Missile and Weapon System

Executive Summary

- As demonstrated during FY12 test flights, the Tomahawk Weapon System continues to meet Navy standards for reliability and performance.
- As assessed in the February 2012 FOT&E report to Congress, the Tomahawk Weapon System continues to be effective and suitable.
- DOT&E considers the planned Operational Test Launch program to be adequate for continued verification of system reliability and accuracy. DOT&E places high value on continuing flight data collection to evaluate end-to-end system performance and reliability for all deployed and deployable Tomahawk missile variants. However, in FY12, the Navy discontinued flight testing of the fielded Block III missiles, which are to remain in operational use until FY20.

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 four fielded variants: a Block II with a nuclear warhead (not deployed), a Block III with a unitary conventional warhead, a Block III with a conventional submunitions warhead, and a Block IV with a conventional unitary warhead.
- Block IV Tomahawk is in production as the follow-on to the Block III conventional unitary warhead variant. These missiles are produced at lower cost and provide added capability, including the ability to communicate with command and control and be redirected to an alternate target during flight.
- The Tomahawk Weapon System also includes the Tomahawk Command and Control System (TC2S) and the shipboard

Activity

- DOT&E submitted the FOT&E operational test report to Congress in February 2012.
- In accordance with the DOT&E-approved Test and Evaluation Master Plan and operational test plan, 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 eight Tomahawk missile test launches in FY12.
- In FY12, DOT&E conducted a comparative flight reliability analysis of over 200 operational Tomahawk firings conducted



Tactical Tomahawk Weapon Control Systems (TTWCS). The TC2S and TTWCS provide for command and control, targeting, mission planning, distribution of Tomahawk tactical and strike data, and post-launch 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

- Missile element: Raytheon Missile Systems – Tucson, Arizona
- Weapon Control System element: Lockheed Martin – Valley Forge, Pennsylvania
- Command and Control element: QinetiQ North America LLC – San Jose, California, and Boeing Inc. – St. Louis, Missouri

by the fleet during FY11 to the reliability demonstrated during all Operational Test Launches conducted to date.

Assessment

- As demonstrated during FY12 test flights, the Tomahawk Weapon System continues to meet Navy standards for reliability and performance. As reported to Congress in the FY12 FOT&E report, 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

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for continued verification of system reliability and accuracy. However, while Block IV testing is funded through FY13, the Navy is not funding further Block III test launches. The Block III missiles are to remain in operational use until FY20. DOT&E places high value on continuing flight test data to evaluate end-to-end system performance and reliability for all deployed and deployable Tomahawk missile variants.

- The DOT&E analysis of FY11 operational Tomahawk firings concluded that Tomahawk fleet firing reliability is consistent with observed FOT&E Operational Test Launch results.

Recommendations

- Status of Previous Recommendations. The Navy has addressed all previous recommendations.
- FY12 Recommendation.
 1. The Navy should resource the FOT&E Operational Test Launch series to include testing of all fielded missile variants.