

## Tomahawk Missile and Weapon System

### Executive Summary

- The Navy continues to conduct Operational Test Launches to verify reliability and performance of fielded Baseline II, 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 FY08 test flights, the Tomahawk Weapon System continues to meet Navy standards for reliability and performance.
- The Navy conducted FOT&E from September to October 2008 to evaluate upgrades to the TC2S, corrective action for deficiencies identified during earlier operational testing, and the ability to conduct Tomahawk strikes at the SECRET classification level. Commander, Operational Test and Evaluation Force (COTF) expects to publish test results in early 2009.

### System

- The Tomahawk Land Attack Missile is a long-range, land attack cruise missile designed for launch from submarines and surface ships.
- Tomahawk Baselines II and III completed production. There are currently three fielded variants, delivering a nuclear warhead (Baseline II only, not deployed), a conventional warhead, or a conventional warhead with submunitions.
- Tactical Tomahawk (Baseline IV) is currently in production as the follow-on to the Baseline III conventional warhead variant. These missiles are produced at lower cost and

### Activity

- The Navy continues to conduct Operational Test Launches to verify reliability and performance of fielded Baseline II, III, and IV Tomahawk missiles; their associated weapon control systems; and the TC2S. The Navy conducted a total of 11 Tomahawk missile test launches during FY08.
- The Navy utilized the Tomahawk flight test program to identify and correct a Baseline IV missile design problem that had the potential to reduce missile reliability.
- DOT&E approved a Test and Evaluation Master Plan revision and a test plan in August 2008 to support the next phase (OT-IIIIE) of Tomahawk Weapon System FOT&E.
- COTF conducted OT-IIIIE from September to October 2008. OT-IIIIE evaluated upgrades to the TC2S, as well as corrective action for deficiencies identified during previous operational testing. Additionally, OT-IIIIE evaluated the ability to conduct Tomahawk strike operations at the SECRET classification level, vice the TOP SECRET level used for all previous Tomahawk operations.



provide added capability, including the ability to communicate with and retarget the missile during flight.

- The Tomahawk Weapons System also includes the TC2S and the shipboard Tomahawk Weapon Control Systems (TWCS). The TC2S provides for targeting, mission planning, distribution of Tomahawk tactical data, and in-flight control of Baseline IV missiles.

### Mission

The Maritime Force Commander can employ the Tomahawk missile for long-range, precision strikes against land targets.

### Prime Contractor

- Raytheon

### Assessment

- Based on FY08 test flights, the Tomahawk Weapon System continues to meet Navy standards for reliability and performance.
- 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, the Navy has not funded Baseline II and Baseline III test launches after FY12. The Baseline III missiles are expected to remain in operational use until 2020. DOT&E places high value on the continuing collection of flight data to evaluate end-to-end system performance and reliability for all deployed and deployable Tomahawk missile variants.
- COTF expects to publish the OT-IIIIE report in early 2009.

# NAVY PROGRAMS

## Recommendations

- Status of Previous Recommendations. The one FY07 recommendation remains valid.
- FY08 Recommendations. None