

Standard Missile 2 (SM-2) Block IIIC



The Standard Missile 2 (SM-2) Block IIIC is a Middle Tier of Acquisition (MTA) program intended to provide medium-range air defense to Aegis cruisers and destroyers. The Navy is conducting a limited operational test known as a Quick Reaction Assessment (QRA) to support an initial capability deployment. DOT&E will issue an Early Fielding Report (EFR) upon completion of the QRA.

SYSTEM DESCRIPTION

The SM-2 Block IIIC is a medium-range, surface-to-air missile with

an active radio frequency seeker. It is a modification to existing SM-2 Block III and IIIA missiles. This modification includes replacing the semi-active seeker with one based on Standard Missile 6 active

seeker technology. The missile features a new dorsal fin design and a thrust vectoring jet tab assembly to control trajectory as the missile egresses the launcher.

MISSION

The Joint Force commander will utilize the SM-2 Block IIIC from Aegis cruisers and destroyers to provide the medium-range component of naval battle force's area and self-defense capability against anti-ship missiles and tactical aircraft.

PROGRAM

The SM-2 Block IIIC is an MTA program that the Navy intends to transition to an Acquisition Category II program upon its completion of an operational demonstration QRA, and approval of its acquisition program baseline capabilities. The Navy intends to field an SM-2 Block IIIC interim capability to the fleet at the completion of QRA.

» MAJOR CONTRACTOR

- Raytheon Missiles & Defense – Tucson, Arizona

TEST ADEQUACY

In July 2022, the Navy flew three SM-2 Block IIIC missiles against four targets during the QRA flight test event on USS *Frank E. Petersen, Jr.* (DDG 121). All testing was conducted in accordance with the DOT&E approved test plan and observed by DOT&E. The Navy has yet to schedule the planned QRA cyber survivability and model and simulation events. Once all events are complete, the QRA will be adequate to demonstrate a limited SM-2 Block IIIC capability but not to determine operational effectiveness, suitability, and cyber survivability.

PERFORMANCE

» EFFECTIVENESS

Preliminary assessment of QRA testing is that the SM-2 Block IIIC is progressing towards a successful demonstration of capability against subsonic anti-ship cruise missile surrogates in a stream raid scenario.

The July 2022 test did identify an anomaly that the Navy intends to address through engineering changes and evaluate in

developmental and operational test when SM-2 Block IIIC transitions to a program of record. A detailed assessment of the anomaly and corrective actions will be provided in a DOT&E EFR after completion of QRA.

» SUITABILITY

Insufficient data are available to determine operational suitability. Early estimates for suitability metrics, reliability and availability, will be reported in a DOT&E EFR upon completion of QRA.

» SURVIVABILITY

Insufficient data are available to determine cyber survivability. DOT&E will report cyber survivability after transition of SM-2 Block IIIC to a program of record and completion of IOT&E.

RECOMMENDATION

The Navy should:

1. Complete the QRA testing to inform the final decision to transition to the Acquisition Category II SM-2 Block IIICU program.