Surface Electronic Warfare Improvement Program (SEWIP)

Executive Summary
- The AN/SLQ-32 Electronic Warfare System (EWS), equipped with the Surface Electronic Warfare Improvement Program (SEWIP) Block 1B2 upgrade, shows improvement in the primary areas of situational awareness and human systems integration.
- Preparations for a full-rate production decision for the SEWIP Block 1B2 increment continue with DOT&E participation.

System
- The SEWIP is an incremental development program that is intended to improve the electronic warfare capability of the Navy's AN/SLQ-32 EWS, variants of which are installed on all Navy surface combatants.
- The first increment (Block 1A) consists of an improved operator console and replacement of obsolete digital processors and tracking modules.
- The second increment (Block 1B) consists of modifications to improve emitter identification, situational awareness, human systems integration, and crew training.

Mission
The Navy surface ships will use SEWIP to enhance their AN/SLQ-32 EWS anti-ship missile defense, counter-targeting, counter-surveillance, and electronic data collection capabilities.

Prime Contractor
- General Dynamics

Activity
- Commander, Operational Test and Evaluation Force (COTF) conducted operational testing of the AN/SLQ-32 EWS with the SEWIP Block 1B2 upgrade in March 2008 and August 2008. Testing was conducted in accordance with a DOT&E-approved test plan. COTF conducted the OT&E onboard USS *Nitze* (DDG 94) in the Virginia Capes operating area and included operationally-representative activities and scenarios using representative Navy enlisted operators.
- DOT&E issued an Operational Test and Evaluation (OT&E) report for the SEWIP Block 1B2 in October 2008.
- Preparations for a full-rate production decision for the Block 1B2 increment of SEWIP continue with DOT&E participation.

Assessment
- The AN/SLQ-32 EWS, equipped with the SEWIP Block 1B2 upgrade, shows improvement in the primary areas of situational awareness and human systems integration.
- A required SEWIP Block 1B2 interface between the Global Command and Control System-Maritime (GCCS-M) system and the AN/SLQ-32 Improved Control and Display (ICAD) operator's console was not developed in time for use with the OT&E test ship's GCCS-M configuration. This prevented the AN/SLQ-32 operator from automatic consideration of GCCS-M data in determining situational awareness. A full evaluation of SEWIP Block 1B2 situational awareness cannot be conducted until this interface is available.
- The test duration was not sufficient to demonstrate with a high degree of confidence that the hardware or software reliability thresholds were attained.
- The October 2008 DOT&E OT&E report states the SEWIP Block 1B2 upgrade does not make the AN/SLQ-32 EWS operationally effective or suitable. However, it does significantly enhance its ability to protect Navy ships by improving situational awareness and human systems integration in addition to laying a good foundation for future upgrades. COTF will conduct an operational evaluation of the full AN/SLQ-32 EWS in conjunction with the SEWIP

Block 2 upgrade that is planned to include improvements to the antenna/receiver system.

Recommendations

- Status of Previous Recommendations. The Navy has not resolved any of the five FY06 recommendations. These recommendations remain valid.
- FY08 Recommendations. The Navy should:
  1. Continue to collect in-service SEWIP Block 1B2 hardware and software reliability data to gain a higher degree of confidence regarding achievement of those requirements.
  2. Provide the required SEWIP Block 1B2 interface between the GCCS-M system and the AN/SLQ-32 ICAD operator's console. Verify this interface during FOT&E testing.