

EA-18G Growler (Electronic Attack Variant of F/A-18)

Executive Summary

- In support of the 3QFY08 second Low-Rate Initial Production (LRIP) decision, DOT&E concurred with the Acquisition Decision Memorandum (ADM) LRIP II entry on May 2, 2008, for the delivery of 18 Airborne Electronic Attack (AEA) aircraft kits. This brings the total number of LRIP approved aircraft kits to 26 out of the required 85 for the program.
- Developmental and operational testing demonstrated that the maturity of the Growler's mission capabilities met planned expectations for this stage of system development. Operational Assessment 2 (OA-2) (October 3, 2007, to February 5, 2008) included full functionality of the following capabilities that were not available for OA-1: the communications countermeasures receiver set (CCS) functionality, low band transmitter integration, precision threat locating, complex threat identification, and jamming across all frequency bands.
- For OA-2, the Navy accumulated 92.4 operating hours over a 134-day test period, successfully demonstrating the EA-18G's end-to-end capability, highlighting the crews ability to detect, identify, and jam simple and complex threats in-flight.
- The Navy's application of integrated testing of EA-18G mission capabilities allowed early identification of areas of risk. This early identification of risk allowed the Navy more time to aggressively pursue resolution of risk issues.
- IOT&E initiation slipped four weeks to allow additional time for resolution of risk issues and began on October 1, 2008.

System

- The EA-18G Growler is a carrier-based radar and communication jammer aircraft.
- The two-seat EA-18G replaces the Navy's four-seat EA-6B. The new ALQ-218 receiver, improved connectivity, and linked displays are the primary design features implemented to reduce the operator workload in support of the EA-18G's two-person crew.
- Integration of AEA capability into the F/A-18F includes:
 - Modified EA-6B Improved Capability (ICAP) III ALQ-218 receiver system
 - Advanced crew station
 - Legacy ALQ-99 jamming pods
 - NewCCS
 - Expanded digital Link 16 communications network
 - Electronic Attack Unit
 - Interference Cancellation System (INCANS) which supports communications while jamming



- Satellite receive capability via the Multi-mission Advanced Tactical Terminal (MATT)
- Additional systems include:
 - Active Electronically Scanned Array (AESA) radar
 - Joint Helmet-Mounted Cueing System
 - High-Speed Anti-radiation Missile (HARM)
 - AIM-120 Advanced Medium-Range Air-to-Air Missile (AMRAAM)

Mission

- Combatant commanders use the EA-18G to support friendly air, ground, and sea operations by suppressing enemy radar and communications.
- Commanders use the EA-18G capabilities to:
 - Jam integrated air defenses
 - Support non-integrated air defense missions and emerging non-lethal target sets
 - Enhance crew situational awareness and mission management
 - Enhance connectivity to national, theater, and tactical strike assets
 - Provide enhanced lethal suppression through more accurate HARM targeting
 - Provide the EA-18G crew air-to-air self-protection with AMRAAM

Prime Contractor

- Boeing

NAVY PROGRAMS

Activity

- Since the first OA was completed in 2QFY07, the Navy has continued testing the EA-18G AEA system's Core Block I functionality, which includes both hardware (CCS, INCANS, and MATT) and software (Build 3.0 and higher releases), which incorporated planned functionality necessary for the IOT&E.
- The Navy completed the second OA of the EA-18G between October 3, 2007, and February 5, 2008, to assess the progress of the Growler's Weapons System development and integration, in support of a 3QFY08 LRIP II decision.
- The OA accumulated 92.4 operating hours over a 134-day test period that successfully demonstrated the EA-18G's end-to-end capability, highlighting the crew's ability to detect, identify, and jam simple and complex threats in-flight. Flight test events were flown at the Atlantic Test Range, Naval Air Warfare Center, Patuxent River, Maryland; the Electronic Combat Range at the Naval Air Weapons Center, China Lake, California; and the Nevada Test and Training Range, Nellis AFB, Nevada.
- The EA-18G supported mission employment large force exercises (LFE) in December 2007 and June 2008. The next LFE occurs in December 2008. The LFEs provide operational environments to better assess interoperability with other Services and agencies. In particular, Multi-functional Information Distribution System/Link 16 information on targeting and threat radar site locations was passed to/from various other participants of the LFE.
- OSD approved a third revised Test and Evaluation Master Plan (TEMP) (Revision C) to support the EA-18G program's entry into LRIP II and IOT&E. OSD's approval was based on entry criteria that were included in the Milestone-C/LRIP I ADM.
- The Navy's FY08 Integrated Test and Evaluation (IT&E) planning incorporated EA-18G effectiveness data products that simultaneously supported DOT&E's Live Fire Analysis of EA-18G susceptibility to radar-guided threats.
- The Navy commenced Integrated Test (IT-C2), the developmental test period following the OA-2. IT-C2 has included live launches of an AMRAAM AIM-120 air-to-air missile and the HARM AGM-88 air-to-ground missile in July 2008.

- The Navy conducted testing in accordance with the DOT&E-approved TEMPs.

Assessment

- The Navy's application of integrated testing of EA-18G mission capabilities resulted in early discovery of technical risks, allowing the Navy more time to mitigate these risks.
- Observations made in IT-C1 along with Commander, Operational Test and Evaluation Force (COTF) comments indicate that there is a susceptibility-related concern for situational awareness limitations associated with the lack of radar warning receiver capabilities in the EA-18G. The operations test team will assess this more thoroughly in the operational evaluation.
- For OA-2, COTF recommended the EA-18G/AEA system continue development but continue to mitigate the following risks:
 - AEA system stability and mission reliability
 - ALQ-218 threat geolocation capabilities
 - Tactical Situational Display clutter and Weapon System Operator workload
 - Selective Reactive Jamming Response timeliness
 - Mission planning environment anomalies
- Based on a successful second OA, the Milestone Decision Authority and USD(AT&L) approved entry into EA-18G LRIP II for the second phase (18 kits) of 26 total LRIP EA-18G AEA kits. Total EA-18G production is planned for 85 aircraft kits.
- DOT&E concurred with the LRIP II ADM decision, stating that testing was adequate to identify system capabilities and limitations in support of the second LRIP decision.
- DOT&E approved a third revised TEMP (Revision C) that is aligned with the Capability Production Document. This document incorporates the entry criteria for the IOT&E.

Recommendations

- Status of Previous Recommendations. The Navy has taken effective action on the FY07 DOT&E recommendations.
- FY08 Recommendations. None.