OASuW Increment 1

Executive Summary
- The Navy completed a Quick Reaction Assessment (QRA) of the Offensive Anti-Surface Warfare (OASuW) Increment 1 program for weapon employment on the F/A-18E/F aircraft in FY19. The system showed partially successful performance results after it experienced two hardware reliability failures that the Program Office mitigated. DOT&E will release a classified report for the QRA of OASuW Increment 1 in 2QFY20.
- The OASuW Increment 1 program continues development of missile software based on lessons learned from Integrated Test Events with F/A-18F aircraft.

System
- The OASuW Increment 1 program is the first program using an incremental approach to produce an OASuW capability in response to a U.S. Pacific Fleet Urgent Operational Need generated in 2008.
- The OASuW Increment 1 is an accelerated acquisition program to procure a limited number of air-launched missiles to meet a near-term U.S. Pacific Fleet capability by leveraging the Defense Advanced Research Projects Agency (DARPA) Long Range Anti-Ship Missile (LRASM).
- LRASM, the weapon system for the OASuW Increment 1, is a long-range, conventional, air-to-surface, precision standoff weapon. The Navy’s F/A-18E/F or the Air Force’s B-1B aircraft will launch LRASM.
- LRASM, designated as the AGM-158C, is derived from the Joint Air-to-Surface Standoff Missile Extended Range (JASSM ER). An anti-jam GPS guidance system, radio frequency sensor (RFS), and an infrared sensor support guidance and targeting.
- Once launched, LRASM guides to an initial point and employs onboard sensors to locate, identify, and provide terminal guidance to the target.

Mission
- Combatant Commanders will use units equipped with LRASM to destroy ships from standoff ranges.

Major Contractor
- Lockheed Martin Missiles and Fire Control – Orlando, Florida

Activity
- The Navy conducted the following testing in FY19 in accordance with the DOT&E-approved Master Test Strategy and the QRA test plan:
  - End-to-end Modeling and Simulation (M&S) runs, including an Integrated Test Event for M&S in March 2019, using the Kill Chain Testbed.
  - Two F/A-18F flights with a single missile and one flight with a two-missile salvo.
  - Captive carry and carrier suitability events were conducted on F/A-18E/F aircraft to evaluate weapon integration with the aircraft and suitability for carrier catapults and arrestments.
- DOT&E submitted a Test Observations Memo for F/A-18E/F weapon employment to the LRASM Executive Steering Board in September 2019.
- The OASuW Increment 1 program continues development of missile software based on lessons learned from Integrated Test Events with F/A-18F aircraft.

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Assessment

- The system experienced two hardware reliability failures during testing that the program has addressed. The fixes incorporated within the system produced partially successful performance results.
- Accreditation of the M&S environment to fully assess LRASM operational performance is incomplete due to limitations presented by the live Integrated Test Event environment. The M&S environment is required to determine whether the system will meet Key Performance Parameter requirements and demonstrate mission capability in more realistic environments. Further details are classified.
- Flight tests were not conducted in realistic operational environments.
- Data collection and analysis is ongoing and DOT&E will release a classified report for the QRA of OASuW Increment 1 in 2QFY20.

Recommendation

1. The Navy should plan and complete cybersecurity testing and IOT&E for LRASM 1.1 in accordance with FY19 congressional direction.