

## Offensive Anti-Surface Warfare (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.



- OASuW Increment 2 will deliver the long-term, air-launched anti-surface warfare (ASuW) capabilities to counter future threats. The Department continues to plan for OASuW Increment 2 to be developed via full and open competition. Due to congressional budget reductions for OASuW Increment 2, the Navy funded an incremental upgrade called LRASM 1.1 to bridge the gap until an OASuW Increment 2 program of record can be established. Increment 2 Initial Operational Capability is planned for the FY28-30 timeframe.

### 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.

## 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.