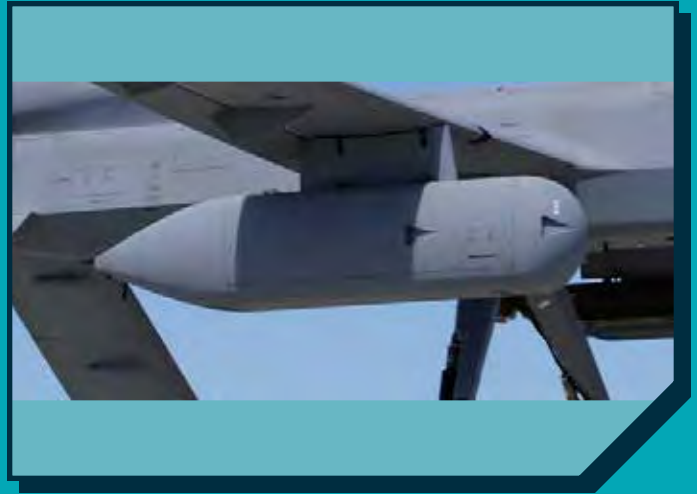


Multi-Function Electronic Warfare – Air Large

The Multi-Function Electronic Warfare – Air Large (MFEW-AL) program did not execute the operational testing needed to meet its acquisition requirements. The lack of program maturity and operational testing precludes a preliminary assessment of MFEW-AL operational effectiveness, suitability and survivability.



System Description

The MFEW-AL is an airborne electronic warfare payload, which will be mounted onto the MQ-1C Group IV Gray Eagle Unmanned Aircraft Systems to provide the Army Battlefield Commander with electronic attack and electronic warfare support capability. The MFEW-AL is part of a larger electronic warfare framework, which includes the Electronic Warfare Planning and Management Tool (EWPMT), to build a common operating picture of the electromagnetic operating environment. The MFEW-AL is designed to detect, identify, locate, deny, disrupt, and degrade enemy communications and non-communications (radars) in support of Multi-Domain Operations.

Program

The MFEW-AL is an Acquisition Category III program. The Army Program Executive Office Intelligence, Electronic Warfare, and Sensors is the milestone decision authority. The MFEW-AL budget has been reduced multiple times and is unfunded in the Army's FY22 Base Budget, submitted in May 2021.

The Army allowed the MFEW-AL program to advance through its acquisition cycle without conducting operational testing.

Major Contractor

Lockheed Martin Systems Integration – Owego, New York.

Test Adequacy

The MFEW-AL Program Office is utilizing a Simplified Acquisition Management Plan with an included T&E strategy as its primary program management document. The Army is continuing to develop the system's engineering plan and design of experiment for the MFEW-AL, but the Simplified Acquisition Management Plan has not yet been submitted to DOT&E to determine the adequacy of its T&E strategy.

The developmental and integrated testing required to mount the MFEW-AL on a field representative MQ-1C Gray Eagle has been delayed due to inconsistent funding, limiting the ability to proceed to operational testing. The program uses surrogate platforms, to include the UV-18A "Twin Otter" and a special use MQ-1C Gray Eagle, to continue developmental testing.

The MFEW-AL Program Office continues to look for opportunities to participate as an enabler in Multi-Domain Operations environment test events to reduce costs. In May 2021, the MFEW-AL participated in an exercise supporting an Infantry Brigade Combat Team operating in a simulated Multi-Domain Operations environment. This approach reduces testing cost but limits the number of accomplished test objectives because the MFEW-AL is not the focus of the testing. The MFEW-AL is currently using a surrogate ground station for developmental testing and is expected to use the EWPMPT in IOT&E scheduled for FY24.

Performance

Effectiveness

The lack of program maturity and operational testing precludes a preliminary assessment of MFEW-AL operational effectiveness. The Infantry Brigade Combat Team demonstrated the capability to conduct limited electronic attack and electronic warfare support in a controlled test environment. While the preliminary testing has demonstrated some capabilities that support program requirements,

the gathered data lack the operational relevance to support an assessment. For example, Soldier Touch Points, intended to assess the utility of MFEW-AL information to the ground forces, have been limited to electronic warfare officers and have not yet included the Army's MQ-1C community. In addition, tactics, techniques, and procedures have not yet been developed to ensure the MFEW-AL is operated in a profile that supports mission success.

Suitability

The lack of program maturity and operational testing precludes a preliminary assessment of MFEW-AL operational suitability. The prototype MFEW-AL design includes known reliability concerns. The lack of an EWMPPT increased the user workload to analyze and produce operational relevant information from the MFEW-AL.

Survivability

The lack of program maturity and operational testing precludes a preliminary assessment of MFEW-AL survivability in a cyber- and electromagnetic spectrum-contested environment.

Recommendations

The Army should:

1. Determine funding requirements to complete the integrated testing required to prepare for operational testing.
2. Submit a Simplified Acquisition Management Plan to DOT&E for review and approval of its T&E strategy.
3. Identify the user community for the MFEW-AL system to ensure Soldier Touch Points and feedback are comprehensive.
4. Coordinate with the Army's Unmanned Aircraft System community to ensure tactics, techniques, and procedures are developed to support operational employment of the MFEW-AL.