

MQ-9 Reaper Hunter-Killer Armed Unmanned Aircraft System (UAS)

Executive Summary

- The MQ-9 Predator B was officially renamed the MQ-9 Reaper in 4QFY06.
- Reaper testing to date has not been conducted in accordance with the DOT&E-approved Test and Evaluation Master Plan (TEMP).
- Air Combat Command directed early fielding of this system to commence in FY07. The decision to field this system requires an update to the current TEMP as it is not clear that adequate testing will be conducted prior to fielding.
- A full-rate production decision will be made during 2QFY09.

System

- The MQ-9 is a remotely piloted, armed, unmanned aerial vehicle (UAV) that uses optical, infrared, and radar sensors to attack ground targets.
- This system includes ground stations for launch/recovery and mission control of sensors and weapons.
- This MQ-9 is a medium-sized UAV that has an operating ceiling up to 50,000 feet, an internal sensor payload of 800 pounds, an external payload of 3,000 pounds, an endurance of approximately 24 hours, and stronger landing gear than its predecessor, the MQ-1 Predator.
- The MQ-9 shares command and control characteristics with the MQ-1 Predator.
- The MQ-9 is commanded by ground elements via Ku-band satellite and C-band line-of-sight data links.
- It carries Hellfire II anti-armor missiles (AGM-114) and 500-pound laser-guided or Global Positioning System-guided bombs.



Mission

- The combatant commander uses the MQ-9 to conduct armed reconnaissance and pre-planned strikes. This system can find, fix, track, target, engage, and assess critical emerging targets (both moving and stationary) using the air vehicle's onboard sensors and weapons.
- The MQ-9's secondary mission is to conduct aerial intelligence gathering, reconnaissance, surveillance, and target acquisition for other airborne platforms.

Activity

This is an Acquisition Category 2 program currently in the System Development and Demonstration phase. The following are highlights of developmental testing for this year:

- The developmental test squadron completed AGM-114P Hellfire integration and ground tests in 4QFY06. Airborne flight testing is scheduled to begin in 1QFY07.
- The Air Force conducted ground testing of the digital electronic engine control during FY06. Airborne testing is to complete during early FY07.
- The MQ-9 Joint Reliability and Maintainability Evaluation Team began collecting and reviewing suitability data.
- The Air Force revised the Capabilities Production Document (CPD) and it has been submitted to the Joint Requirements Oversight Council.

Assessment

- Operational testing has not been conducted in accordance with the DOT&E-approved TEMP. Therefore, DOT&E cannot assess the operational effectiveness and suitability of the MQ-9 Reaper system at this time.
- The current TEMP requires a revision in order to address changes made in the revised CPD and to outline the operational test strategy for this system.
- The Air Force program manager has developed a schedule to meet Air Combat Command's acceleration direction for early fielding in mid-2007. Operational evaluation of significant air-to-ground capability, to include the AGM-114P Hellfire, the GBU-12 Laser-Guided Bomb, and GBU-38 Joint Direct Attack Munition has not been scheduled to support characterizing these capabilities for this early fielding.

AIR FORCE PROGRAMS

Recommendations

- Status of Previous Recommendations. The Air Force addressed two of the FY05 DOT&E recommendations. The following recommendation remains unresolved:
FY05 #3: DOT&E recommended that the acquisition and fielding strategies be revised in order to permit more focused and effective operational testing. Although initial agreements were made during 4QFY06 to conduct an operational evaluation, the details have not been defined.
- FY06 Recommendations. The Air Force must:
 1. Update the current TEMP to address the operational evaluation schedule with respect to the Air Force Air Combat Command request for early fielding of this system.
 2. Ensure that operationally representative test articles are made available for adequate operational test prior to fielding.
 3. Complete planned integrated system evaluations I and II in order to prepare for IOT&E in FY08.