

Armed Reconnaissance Helicopter (ARH)

Executive Summary

- The Armed Reconnaissance Helicopter (ARH) entered System Development and Demonstration (SDD) at Milestone B on July 7, 2005. This decision included the selection of a modified Bell 407 helicopter as the ARH. The Army acquisition approach for the ARH depends on modifying an off-the-shelf aircraft, in this case a Bell 407 helicopter, for military operations.
- SDD test activities are designed to confirm flight performance and integration of mission equipment (navigation, communications, weapons, and survivability equipment) onto a modified Bell 407.
- The schedule for the system development is aggressive with a 18-month integration and test phase following the Milestone B decision.



System

- The ARH is a modified Bell 407 helicopter integrated with a mission equipment package.
- The ARH will replace the OH-58D Kiowa Warrior.
- The Acquisition Objective is 368 aircraft with a full-rate production decision in 1QFY09. The Army plans to have 10 ARH per troop and 30 per squadron.
- The ARH fires 2.75-inch aerial rockets and Hellfire missiles. It has armored crew stations, and employs Aircraft Survivability Equipment to include chaff/flare, radar, and missile warning.
- The ARH will integrate the Common Avionics Architecture System that has target acquisition sensor systems for day, night, and marginal weather operations.

Mission

- A regimental aviation squadron, as part of the Multi-Functional Aviation Brigades, employs ARH to conduct reconnaissance for collection of combat information and intelligence about enemy and terrain.
- ARH squadrons also provide security and early warning against enemy observation or attack.
- Other ARH troop missions include:
 - Command and control
 - Communications relay
 - Convoy security
 - Nuclear/chemical surveys

Activity

- DOT&E approved the Test and Evaluation Master Plan, including an initial LFT&E strategy, on June 30, 2005.
- The ARH entered SDD at Milestone B on July 7, 2005. SDD test activities are designed to confirm flight performance and integration of mission equipment (navigation, communications, weapons, and survivability equipment) onto a modified, off-the-shelf Bell 407 aircraft.
- The ARH Test and Evaluation Master Plan and acquisition strategy will be updated for a Milestone C decision scheduled for July 2006, while the full-rate production decision review is scheduled for June 2008.

Assessment

- The Test and Evaluation Master Plan was adequate to support Milestone B. The Army is working on additional

- details following source selection to clarify the scope of developmental and integration testing necessary for the Bell 407.
- ARH is a covered system for LFT&E. The LFT&E strategy includes full-up system-level testing and will be updated with platform specific details now that the Bell 407 has been selected.
- The Army acquisition approach for the ARH depends on modifying an off-the-shelf aircraft for military operations. This will require discipline within the program management to ensure non-essential missions, which exceed the capabilities of the airframe, are not added as requirements.
- The ARH schedule is aggressive. The Milestone Decision B in June 2005 initiated an 18-month integration and test phase.
- The Army plans to conduct IOT&E with one live platoon

ARMY PROGRAMS

(four to five aircraft) and one simulated platoon (four to five aircraft). This approach is dependent upon successful simulation of ARH troop-level missions.

Recommendations

The Army should:

1. Begin integration testing for mission equipment as early as possible with SDD aircraft to conduct simultaneous testing of performance, avionics, armament, and survivability equipment.
2. Validate modeling and simulation of an ARH platoon during a Limited User Test to produce troop-level reconnaissance products and operational realism. If not able to validate the modeling and simulation, the Army must require realistic troop level mission testing with 10 production representative aircraft for the IOT&E.