
Director, Operational Test and Evaluation

FY 2005 Annual Report



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This report satisfies the provisions of Title 10, United States Code, Section 139. The report summarizes the operational test and evaluation activities (including live fire testing activities) of the Department of Defense during the preceding fiscal year.

DW Duma

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Combat Search and Rescue Replacement Vehicle (CSAR-X) Personnel Recovery Vehicle (PRV)

Executive Summary

- The acquisition strategy for the Combat Search and Rescue Replacement Vehicle (CSAR-X) violates the “fly before buy” concept of sound acquisition.
- The program needs additional time to meet the needs of the warfighter, satisfy sound practices for Live Fire and operational testing, and incorporate test findings into production before decision points.

System

CSAR-X Personnel Recovery Vehicle (PRV) is intended to replace aging HH-60 CSAR helicopters with a new vehicle capable of meeting the Air Force Combat Search and Rescue (CSAR) requirements. The program requirements are:

- Two hundred and seventy-five nautical miles (nm) combat radius
- Capable of executing sample scenarios as listed in requirements documents
- Downwash that does not impede safe and successful recovery of personnel
- Capable of supporting worldwide operations within 24 hours of departure, ready for deployment within three hours of tasking, and ready for operations within three hours of arrival
- Meeting self-defense, survivability, and vulnerability requirements that support CSAR
- Capable of lethally and electronically engaging threats
- Cabin space and capacity to carry 2,900 pounds including aircrew, recovery team, and four ambulatory patients

Mission

Rescue units equipped with CSAR-X (PRV) reduce the time needed to conduct and support personnel recovery. Time is the single most important factor in successful recovery of isolated personnel. CSAR-X intends to reduce time required with:

- Rapid deployment to reach recovery operating areas quicker.



- Operations in main base, austere location, and day/night global environment (e.g., arctic, desert, littoral, mountainous, sea, tropical), in order to prevent poor conditions from slowing or stopping a recovery.
- Single-pilot flight operations of all electronic/sensor weapons systems including countermeasures, leaving the second pilot to navigate, communicate, and manage mission execution. This reduces the Forces needed on a given recovery operation.
- In-flight refueling and self-support to the maximum extent practical, to extend the potential recovery area and reduce required support for a recovery.

Activity

- The program intends to have Milestone B for source selection and entry into development in FY06. Three companies plan to answer an Air Force Request for Proposal for the CSAR-X. Each company will participate in a flying demonstration before the Air Force does its source selection.
- The program is a covered program for the purposes of LFT&E and has been developing a LFT&E strategy with DOT&E.

- The Air Force Operational Test and Evaluation Center and the program office are drafting a Test and Evaluation Master Plan for Milestone B.

Assessment

The program proposed an acquisition strategy that quickly fields a replacement aircraft as the current rescue helicopters reach

retirement. This strategy uses previously-developed aircraft, and proposes modifying them to meet rescue requirements. The program intends development to be only 18 months, including Live Fire testing and initial developmental testing. It will support a low-rate initial production decision with an operational assessment. The program then proposed to modify or retrofit the developmental aircraft before starting initial operational testing.

DOT&E is concerned that the acquisition strategy will not incorporate corrections into production before Operational Testing (OT). The strategy violates the "fly before buy" concept because it:

- Begins low-rate production before the developer can incorporate findings from Live Fire testing into design

- Carries developmental aircraft not production aircraft into OT
- Commits to full-rate production before the developer can incorporate findings from OT into production

Recommendations

1. While we recognize the Service's need for a replacement helicopter, the test program should adopt an event-driven strategy instead of a schedule driven one.
2. The strategy should complete Live Fire development before producing aircraft. The program should adopt a test-fix-fly approach to development and initial production.
3. The program should use production-representative aircraft for operational testing.