

Expeditionary Fighting Vehicle (EFV)

Executive Summary

- The Marine Corps has restructured the Expeditionary Fighting Vehicle (EFV) program to:
 - Extend System Development and Demonstration (SDD) by five years
 - Redesign the vehicle for reliability
 - Build second-generation SDD prototype vehicles
- Prior to entering production, the program will conduct an operational assessment using the second-generation SDD vehicles.

System

- The EFV is an amphibious combat vehicle for the Marine Corps.
- The Marines intend the EFV to be capable of high-speed water transit at over 20 knots and have land mobility capabilities comparable to the M1A1 tank after transitioning out of the water.
- The EFVC (command variant) is operated by a crew of three and transports a commander and his staff of eight Marines.
- The EFVP (personnel variant) is operated by a crew of three and carries a reinforced rifle squad of 17 Marines.
- The EFVP has a stabilized 30 mm chain gun and coaxial machine gun in the turret.

Mission

Units equipped with EFVs will transport elements of an amphibious assault force from ships over the horizon to inland objectives.



Commanders will use the:

- Personnel variant as an armored fighting vehicle ashore in support of land combat providing transportation, protection, and direct fire support
- Command variant to provide command, control, and communications capabilities to support ground combat tactical command posts

Prime Contractor

- General Dynamics

Activity

- In July 2008, DOT&E approved an updated Test and Evaluation Master Plan (TEMP) reflecting the restructured program.
- The restructured plan delays Milestone C low-rate initial production decision five years (from January 2007 to December 2011) to allow time to design and construct a second generation of SDD prototypes. The program will conduct a second operational assessment that would use these redesigned vehicles.
- The restructured program will provide 14 production representative vehicles for IOT&E and three for full-up system-level LFT&E.
- In July 2008, DOT&E approved the test plan for the first of two EFV waterborne directional stability combined developmental and operational test events. The first event is scheduled for November 2008.
- The first waterborne directional stability developmental test and operational test event was completed before the critical

- design review in November 2008. The event to assess the effectiveness of turret design modifications that are intended to improve the reliability of the EFVP weapon system will not be completed until 4QFY09, after the critical design review.
- Live fire testing conducted during this period included ballistic and watertight integrity testing of a sponson section with advanced composite armor and new panel fasteners and seals. The Program Office also conducted underwater explosion shock testing of an SDD-1 prototype vehicle.

Assessment

- The restructured program contains adequate government developmental and operational testing to determine the system reliability prior to Milestone C in FY12.
- The second operational assessment will repeat the mission scenarios from the first assessment to facilitate evaluation of demonstrated performance and system reliability.

Recommendations

- Status of Previous Recommendations. The Marine Corps partially incorporated the FY07 recommendation to conduct two developmental test and operational test events before the critical design review for the second generation SDD-phase vehicles.
- FY08 Recommendation.
 1. Following completion of the assessment of the redesigned turret, the program should revisit the critical design review to incorporate the results of that assessment.