

## Guided Multiple Launch Rocket System (GMLRS)

**G**MLRS is a guided rocket fired from the M270A1 or High Mobility Artillery Rocket System (HIMARS) launchers. GMLRS is a multinational program. The design accuracy is less than two mils (120 meters at 60 kilometers) without Global Positioning System (GPS) and less than 15 meters with GPS. It carries dual-purpose improved conventional munition (DPICM) bomblets or a recently funded developmental-unitary high explosive warhead to ranges greater than 60 kilometers.

The intent is that a unit equipped with GMLRS will shoot farther (60 km versus 30 km), achieve desired effects with fewer rockets (due to the improved accuracy), and have fewer duds than the currently fielded MLRS rocket. GMLRS is used primarily in general support of maneuver divisions and corps. GMLRS DPICM is employed against lightly armored, stationary targets such as towed artillery, air defense units, and communication sites. GMLRS unitary will have three fuze settings for use against personnel in the open (proximity fuze); lightly fortified bunkers (delayed fuze); or a single, lightly armored target (point detonating fuze).

GMLRS DPICM is scheduled for an April 2003 Milestone C, a FY05 full-rate production decision, and a FY06 initial operational capability. GMLRS unitary is tentatively scheduled for a FY03 Milestone B and is envisioned to be a spiral development program. Block I, with delayed and point detonating fuze settings, will be fielded in FY06. Full capabilities, consisting of all three fuze modes and other improvements, will be fielded with the Block II in FY08.

### TEST & EVALUATION ACTIVITIES

All six engineering design tests and all nine Production Qualification Tests (PQTs) have been completed for GMLRS DPICM.

Live Fire Test and Evaluation (LFT&E) of the DPICM warhead will be integrated with the Developmental and Operational Testing against surrogate targets. Individual target element damage will be assessed after each mission to determine the achieved fractional damage.

DOT&E is working with the Army to develop an adequate operational test and LFT&E strategy for GMLRS unitary.

### TEST & EVALUATION ASSESSMENT

To date, tests demonstrate that the GMLRS rocket has the accuracy and range needed to meet its requirements, however, the dud rate continues to be a concern.

The GMLRS program recently began testing the full-up rocket. Nine rockets were fired in six engineering development tests. All of the seven rockets that dispensed submunitions were well within the accuracy needed to meet effectiveness requirements. One rocket did not dispense its submunitions. An additional rocket did not launch. Fixes were identified and included in the production qualification flights, and the problems have not recurred. All nine PQTs have been completed and demonstrated accuracy was within the requirements needed to meet the effectiveness criteria. The sixth PQT identified two mechanical problems. Fixes for these problems were applied and successfully retested.



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## ARMY PROGRAMS

The required dud rate (less than 1 percent) has not been achieved. The Army hoped to achieve this requirement by making adjustments to the fuze of the current DPICM bomblet. In the recent PQTs, the new bomblet had a slightly lower dud rate than the current bomblet, but the dud rates were still above the 1 percent requirement. Dud rates for the new bomblet design ranged from 1 to 5 percent, with one mission at 13 percent. The project office will explore additional bomblet design changes, but the modified bomblet may not meet the dud rate requirement. The European partners are designing and testing a bomblet with a self-destruct fuze; however, this bomblet version may not be available until after the planned GMLRS full-rate production decision. The Army has not yet decided if it will pursue the self-destruct fuze. With the current dud rate, GMLRS still has the potential to meet its operational effectiveness requirements.

Additional tests are planned to demonstrate GMLRS DPICM effectiveness against countermeasured targets and to show its interoperability. All flight tests to date have been accomplished with a modified Improved Position Determining System launcher, as opposed to an operationally representative one. Planned interoperability testing, therefore, will demonstrate that GMLRS can be fired from the M270A1 and HIMARS launchers.