

M30 Guided Multiple Launch Rocket System (GMLRS) – Dual Purpose Improved Conventional Munitions (DPICM)

Executive Summary

- The M30 initial operational test, conducted in accordance with a DOT&E-approved test plan, was adequate to assess its operational effectiveness and suitability. DOT&E delivered the test and evaluation report (see page 293) in May 2005.
- The system is operationally effective and suitable. Follow-on actions are required to mitigate the system's limitations and fully exploit its capabilities.
- The Army entered full-rate production with the M30 in June 2005.

System

- There are two variants of Guided Multiple Launch Rocket System (GMLRS) munitions: a unitary rocket and a Dual-Purpose Improved Conventional Munitions (DPICM) rocket, the M30.
- Both variants:
 - Have ranges over 60 kilometers (km)
 - Employ inertial guidance and the Global Positioning System to enhance accuracy
- The M30 rocket carries a payload of 404 DPICM submunitions, which is a reduction from the 644 in the current M26 DPICM rocket.
- The procurement objective for GMLRS is 140,004 unitary and DPICM rockets. The ratio between unitary and DPICM rockets is yet to be determined.

Mission

- Commanders will use M30 rockets to fire general support missions at long-range targets that can be attacked with DPICM munitions.



- Targets include lightly armored, stationary targets such as personnel, artillery, air defense, and communications sites.
- GMLRS rockets provide a day and night engagement capability in virtually any terrain or weather condition.
- Two multiple launch rocket system launchers, the M270A1 and High Mobility Artillery Rocket System (HIMARS), are capable of firing GMLRS rockets.

Activity

- The Army conducted the M30 initial operational test in two phases. The ground phase was conducted in September 2004 in conjunction with the HIMARS initial operational test at Fort Sill, Oklahoma. During this phase, HIMARS launchers simulated firing 112 M30 missions, using weapons simulators that replicated all aspects of the fire mission cycle.
- The Army conducted the flight test phase at White Sands Missile Range, New Mexico, in October and November 2004. The test unit fired 24 M30 rockets against three threat representative targets at ranges between 35 and 66 km.

- The Army used six live fire missions, conducted during developmental and operational testing, to evaluate the munition's lethality.
- The Army entered full-rate production with the M30 in June 2005.

Assessment

- Operational testing was adequate to support an evaluation of the M30 rocket's operational effectiveness and suitability.

ARMY PROGRAMS

- The GMLRS M30 rocket is operationally effective. The M30:
 - Is more accurate and can achieve greater ranges than the current M26 or M26A2 DPICM munitions.
 - Is lethal against its intended target sets.
 - Is not degraded by Global Positional System jamming.
 - Is dependent on the availability of accurate, long-range sensors to provide timely targeting information. Currently, there are few target acquisition capabilities that meet these requirements. As a result, the effectiveness of the munition will be less than it could be until long-range sensors become more accurate and the target acquisition and execution process is timelier.
- The GMLRS M30 rocket is operationally suitable. The M30:
 - Is reliable as it comes off the production line. However, follow-on testing conducted by the Army indicates that the M30 has durability issues and potential long-term storage problems caused by moisture leaks.
 - Has a submunition dud rate that is significantly lower than current DPICM rockets at all ranges. It does not meet the DoD standard for submunition dud rates of less than 1 percent. It also does not meet the standard for dud rates, as amended by the Joint Requirements Oversight Council (JROC) for this munition, of less than 4 percent at ranges less than 20 km. It does meet the JROC-amended standards for dud rates at ranges beyond 20 km.
 - Is supportable within the Army's current maintenance, logistics, training, and manpower structures.
- Has a rocket motor and warhead that are not compliant with DoD insensitive munition requirements. The JROC waived this requirement for approximately 4,600 M30 rockets to be procured through FY06.

Recommendations

The Army should:

1. Continue efforts to make the M30 fully compliant with insensitive munitions standards. The Army is currently developing a rocket motor and submunitions that are compliant with these standards. As an interim solution, the Army should review and adjust procedures for tactical operations, commercial and military transportation, resupply, storage, and security to mitigate these risks.
2. Continue efforts to meet DoD policy requirements for submunition dud rates of less than 1 percent at all ranges. The Army is pursuing a self-destruct fuze to reduce the dud rate.
3. Continue lifecycle testing to validate that environmental or storage conditions do not adversely affect munition reliability.
4. Review procedures for targeting and command and control to exploit the enhanced accuracy and range capabilities of GMLRS munitions. The Army should consider sponsoring a Joint operational exercise to determine if the current sensor and targeting architecture is sufficient to exploit the capabilities of GMLRS and other long-range munitions.