

Guided Multiple Launch Rocket System (GMLRS) Executive Summary

The Army's testing of the Guided Multiple Launch Rocket System (GMLRS) XM30 rocket was adequate. The GMLRS XM30 rocket is operationally effective and suitable.

System Overview

The GMLRS is a system of munitions. There are two versions, the dual-purpose improved conventional munitions (DPICM) rocket and a unitary rocket. This report covers the DPICM version of the GMLRS rocket – the XM30.

The XM30 system consists of the rocket and the launch pod container. This guided rocket is capable of reaching ranges over 60 kilometers. Commanders will use XM30 rockets primarily in a general support role to attack lightly armored, stationary targets such as personnel, artillery, air defense, and communications sites.

Test Adequacy

Testing was adequate to support an evaluation of the rocket's operational effectiveness and suitability. This evaluation is based on data derived from both developmental and operational testing of XM30 rockets.

Operational Effectiveness

The GMLRS XM30 rocket is operationally effective. Developmental and operational testing demonstrated that:

- XM30 rockets are more accurate and can achieve greater ranges than the current M26 or M26A2 DPICM munitions. Because of the XM30 guidance capabilities, depending upon the range, it generally requires three to five times fewer XM30 rockets than M26 rockets to attack a target with equivalent effects. XM30 rockets are lethal against their intended target sets.
- MLRS units can execute XM30 missions quickly enough to be responsive to field commanders' tactical requirements. However, the effectiveness of the XM30 at extended ranges is dependent upon long-range sensors that are both accurate and available to provide timely targeting information to MLRS units. Currently, there are few target acquisition assets that meet these requirements.
- GPS jamming does not degrade the overall effectiveness of the XM30 rockets.
- Follow-on testing conducted after the IOT demonstrated that camouflage nets erected over the targets do not have an operationally significant impact on the functioning of the M101 submunitions.

Operational Suitability

The GMLRS XM30 rocket is operationally suitable. Developmental and operational testing demonstrated that:

- The XM30 rockets are reliable as they come off the production line. However, follow-on testing conducted by the Army indicates that the XM30 has durability issues and potential long-term storage problems caused by moisture leaks.
- The XM30's submunition dud rate is significantly lower than current DPICM rockets at all ranges, which results in significantly less unexploded ordnance to impair friendly maneuver and cause casualties to non-combatants.
- The XM30 does not meet the DoD standard for submunition dud rate of less than 1 percent. It also does not meet the Joint Requirements Oversight Council-amended requirement of less than 4 percent at ranges less than 20 km. It does meet the amended requirements of less than 2 percent at ranges between 20-60 km, and less than four percent at ranges beyond 60 km.
- The XM30 rocket is supportable within the Army's current maintenance, logistics, training, and manpower structures.
- XM30 rockets are safe and suitable for use in an electromagnetic environment and can be decontaminated if exposed to nuclear, biological, or chemical contaminants.
- The XM30 rocket motor and warhead are not compliant with DoD insensitive munition requirements. Like other existing rockets and missiles, the XM30 places soldiers and other equipment at risk and makes them vulnerable if exposed to enemy fire, including improvised explosive devices, rocket propelled grenades, small arms fire, or mortar/artillery fragments. Crews and equipment are also at risk due to the XM30's vulnerability to detonation from onboard system fires or burning munitions.

ANNEX - BLRIP EXECUTIVE SUMMARIES

Recommendations

The Army should:

- Continue efforts to make the XM30 fully compliant with insensitive munitions standards. This effort should include retrofitting or deactivating the munitions initially fielded that will not meet these standards. As an interim fix, the Army should implement solutions to mitigate the risks posed by the XM30's non-compliance with insensitive munitions standards. This effort should include reviewing all tactics, techniques, and procedures dealing with tactical operations, commercial and military transportation, resupply, storage, and security.
- Continue efforts to meet DoD policy requirements for submunition dud rates of less than one percent at all ranges. As an interim step, the Army should continue efforts to achieve and validate a dud rate of less than 4 percent at ranges less than 20 km, as per the amended requirement approved by the Joint Requirements Oversight Council.
- Continue to conduct rigorous life cycle testing to validate that extreme environmental or storage conditions do not adversely affect munition reliability. In particular, the Army must solve a problem with moisture leaks that can cause long-term storage issues.
- Review Joint tactics, techniques, and procedures for targeting and command and control to exploit the enhanced accuracy and range capabilities that GMLRS munitions provide. The Army should consider sponsoring a joint operational test to determine if current sensors and the targeting architecture are sufficient to exploit the capabilities of GMLRS and other long-range munitions.
- Conduct additional developmental testing to determine whether camouflage nets of non-U.S. design impact the lethality and dud rate of the XM30's M101 submunitions.
- Conduct follow-on developmental and operational testing to confirm that planned upgrades to the XM30 do not adversely affect operational effectiveness and suitability.