

Guided Multiple Launch Rocket System – Alternate Warhead (GMLRS-AW) XM30E1

Executive Summary

- The M30E1 Guided Multiple Launch Rocket System – Alternate Warhead (GMLRS-AW) surface-to-surface rocket will meet the DOD unexploded ordnance policy requirements and replace the non-compliant GMLRS Dual-Purpose Improved Conventional Munitions rocket.
- In FY14, the Army conducted GMLRS-AW developmental testing/operational testing (DT/OT) in which Soldier crews fired 15 rockets during 3 tactical-fire missions against threat-representative targets.
- The M30E1 GMLRS-AW IOT&E was executed from October through November 2014. DOT&E will submit a combined IOT&E/LFT&E Report to support the Army's planned March 2015 Full-Rate Production decision.

System

- The M30E1 GMLRS-AW rocket uses Inertial Measurement Unit and GPS guidance to engage area targets out to 70 kilometers.
- GMLRS-AW uses the same rocket motor, guidance system, and control system as the existing M31A1 GMLRS Unitary warhead rocket.
- The GMLRS-AW rockets can be fired from the tracked M270A1 Multiple Launch Rocket System and the wheeled High Mobility Artillery Rocket System (HIMARS).
- The 200-pound GMLRS-AW high-explosive warhead contains approximately 160,000 preformed tungsten fragments. This warhead change eliminates the unexploded ordnance found in the GMLRS Dual-Purpose Improved Conventional Munitions rockets.
- GMLRS-AW meets the dud rate requirement as defined by the current DOD Policy on Cluster Munitions and Unintended Harm to Civilians memorandum dated June 19, 2008.
- The procurement objective is 18,072 GMLRS-AW rockets. The Army plans to enter full-rate production in March 2015 following IOT&E.



Mission

Commanders will use GMLRS-AW rockets to engage area- or imprecisely-located targets without the hazard of unexploded submunitions. The target set includes counterfire, air defense, command posts, assembly areas, light materiel, and other high payoff targets.

Major Contractor

Lockheed Martin Missiles and Fire Control – Dallas, Texas

Activity

- From October 2013 to April 2014, the Army completed the Production Qualification Test (PQT) flight test series, which consisted of 5 missions and 17 GMLRS-AW rockets fired at short, medium, and long ranges (16.8, 37.4, and 65.7 kilometers, respectively). PQT missions were launched from M270A1 launchers and M142 HIMARS launchers. Four of the five missions were fired at elements of targets that will be used in the IOT&E: a towed howitzer battery including

personnel, a forward command post, and a surrogate SA-6 radar.

- During FY14, the GMLRS-AW Program Office conducted PQT ground testing, including static arena tests to evaluate warhead lethality, temperature shock and vibration testing, software development testing, and system integration tests.
- In June 2014, Soldiers from the 214th Fires Brigade at Fort Sill, Oklahoma, conducted an integrated DT/OT at

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White Sands Missile Range, New Mexico, consisting of three, tactical-fire missions. There were 15 rockets fired from a HIMARS launcher.

- During the DT/OT period, the Army conducted a cybersecurity vulnerability assessment of the HIMARS and M270A1 launchers and the Advanced Field Artillery Tactical Data System.
- The GMLRS-AW IOT&E was executed from October through November 2014.
- DOT&E will submit a combined IOT&E/LFT&E report to support the Army's planned March 2015 Full-Rate Production decision.
- The Army conducted the PQT and DT/OT in accordance with the DOT&E-approved Test and Evaluation Master Plan and test plans.

Assessment

- GMLRS-AW munition is accurate and reliable. DOT&E is evaluating the effectiveness and lethality of the GMLRS-AW munition. GMLRS-AW munition contains no submunitions minimizing the unintended harm to civilians and infrastructure associated with unexploded ordnance from cluster munitions.

- The PQT demonstrated the GMLRS-AW rocket is reliable (17 successes in 17 flights) and accurate (median miss distance of 2.1 meters). Reliability and accuracy were further demonstrated in the June 2014 DT/OT (15 successes in 15 flights, and median miss distance of 2.7 meters). There is no system requirement for accuracy. The contractor specification is less than 15 meters Circular Error Probable.
- During DT/OT, Soldier crews were able to process and execute GMLRS-AW fire missions using the HIMARS launcher and the Advanced Field Artillery Tactical Data System command and control software.
- The GMLRS-AW system met the requirement for the three fire missions in the DT/OT, including one fire mission where GPS jamming occurred.

Recommendations

- Status of Previous Recommendations. The Army addressed all previous recommendations.
- FY14 Recommendations. None.