

Massive Ordnance Penetrator (MOP)

Executive Summary

- In October 2014, the Air Force successfully completed one weapon drop from the B-2 aircraft on a representative target. The test, conducted at the White Sands Missile Range, New Mexico, demonstrated weapon behavior after planned enhancements were incorporated.
- DOT&E intends to publish a classified Early Fielding Report in early 2015 to summarize the FY15 testing of the Enhanced Threat Reduction (ETR) Phase 2 effort.

System

- The GBU-57 Massive Ordnance Penetrator (MOP) is a large, GPS-guided, penetrating weapon with the ability to attack deeply-buried and hardened bunkers and tunnels. The warhead case is made from a special high-performance steel alloy and its design allows for a large explosive payload while maintaining the integrity of the penetrator case during impact.
- The B-2 Spirit is the only aircraft in the Air Force programmed to employ the MOP.
- The GBU-57 warhead is more powerful than its predecessors, the BLU-109 and GBU-28.
- The MOP is an Air Force-led, Quick Reaction Capability that is on DOT&E oversight, as well as a Secretary of Defense special interest effort.



Mission

Combatant Commanders use MOP to conduct pre-planned, day or night attacks against defended point targets vulnerable to blast and fragmentation effects and requiring significant penetration, such as hardened and deeply-buried facilities.

Major Contractor

The Boeing Company, Defense, Space & Security – St. Louis, Missouri

Activity

- Prior to the live-flight missions, the Air Force conducted one static test and flew one captive-carry test in August and September 2014, to validate the hardware and software changes implemented in the MOP.
- In October 2014, the Air Force executed one weapon drop at White Sands Missile Range, New Mexico, on a representative target. This testing was to evaluate the effect of the ETR Phase 2 modifications to the weapon system performance. An Air Force B-2 aircraft flew one mission to complete the drop. Two free-flight missions, one inert and one live warhead, remain to complete ETR Phase 2 testing.

Assessment

- Both the static and captive-carry tests were successful and allowed the program to proceed to live weapons employment.
- The Air Force and DOT&E are currently assessing the results from the MOP ETR Phase 2 effort, and will report them in a classified DOT&E Early Fielding Report in early 2015.

Recommendations

- Status of Previous Recommendations. While there were no previous Annual Report recommendations for this program, the Air Force addressed all recommendations in the September 2013 Early Fielding Report.
- FY14 Recommendations. None.

FY14 AIR FORCE PROGRAMS