

Future Combat Systems (FCS) Unattended Munitions: Non-Line-of-Sight Launch System (NLOS-LS)

Executive Summary

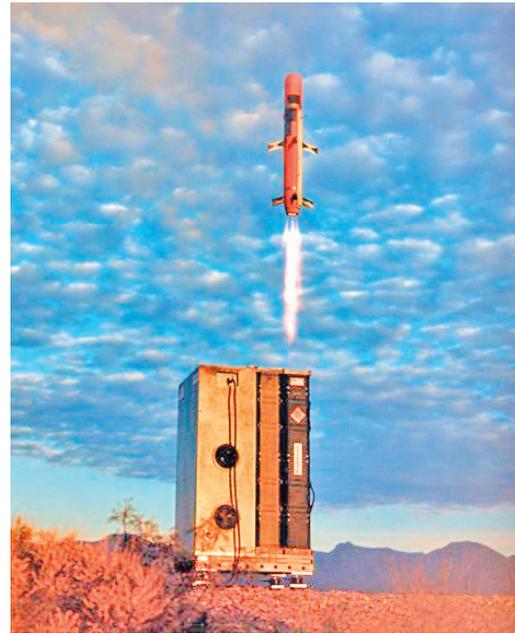
- In FY05, the contractor continued to develop and test the Precision Attack Missile sensor, airframe, and warhead. Missile test flights will begin in early FY07.
- The Army will assess Non-Line-of-Sight Launch System (NLOS-LS) in the Evaluation Brigade Combat Team (EBCT) during 2008.
- The Army plans to conduct an Initial Operational Test (IOT) with Container Launch Units (CLUs) and Precision Attack Missiles, as part of the Future Combat System (FCS) Spin Out 1 IOT, in FY10. After the IOT, the Army plans to field this capability to the current force.
- The Army has delayed development funding for the Loiter Attack Missile.

System

- NLOS-LS is an FCS program. It includes two variants of precision-guided missiles:
 - Precision Attack Missile
 - Loiter Attack Missile
- Soldiers launch the missiles from the CLU, which holds 15 missiles, as well as the Computer and Communications System (CCS).
- Soldiers can mount the CLU and fire the missiles from a variety of vehicles or from the ground.
- The Army will test the CLU and Precision Attack Missile as part of the FCS Spin Out 1.

Mission

- Commanders will use Precision Attack Missiles to attack moving and stationary point targets, such as tanks and armored



- troop carriers, out to 40 kilometers (km). These missiles will use infrared and semi-active laser sensors to attack targets.
- Commanders will use Loiter Attack Missiles to attack moving and stationary point targets beyond the range of other sensors and indirect fire weapons out to 70 km. These missiles will loiter over a target area and use a laser radar sensor to send images over the FCS network to aid operators in selecting targets.
- The Loiter Attack Missile will also have the capability to select and attack targets autonomously.

Activity

- Contractor testing during FY05 included captive flight tests to develop the missile sensor, static motor tests, software tests, and insensitive munition tests.
- The contractor also developed two warhead types, and has performed a variety of development tests against both armor and bunker targets. The warhead design will include a unitary-shaped charge for penetrating armor and a fragmentation wrap for soft targets.
- The Army is planning to have the EBCT experiment with prototype CLUs, and conduct Precision Attack Missile flight tests at White Sands Missile Range, New Mexico, beginning in early FY08. This experimentation will allow the Army to

- explore and refine employment tactics. The EBCT will use these CLUs to participate in the FCS Spin Out 1 limited user test later in FY08, but this test will not include the live fire of any missiles.
- The Army plans to conduct an IOT with CLUs and Precision Attack Missiles, as part of the FCS Spin Out 1 IOT, in FY10. After the IOT, the Army plans to field this capability to the current force.
- The Navy is pursuing a version of NLOS-LS as protection against small boats engaging in suicide attacks. Testing of the Precision Attack Missile seeker's ability to detect boats is ongoing and will continue next year.

ARMY PROGRAMS

- The NLOS-LS Program Office is developing its Test and Evaluation Master Plan, including the LFT&E strategy, as an annex to the FCS Test and Evaluation Master Plan.
- The NLOS-LS LFT&E strategy will leverage developmental and operational testing, as well as modeling and simulation, to evaluate the lethality of the Precision Attack Missile. DOT&E expects that the Army will also evaluate the vulnerability associated with the combat-loaded NLOS CLU.
- Warhead development is on a tight schedule, but is benefiting from a unitary design concept originally developed for the Joint Common Missile.
- The Army is making progress in developing the tactics and procedures needed to employ NLOS-LS within the current force. The Army may begin experimentation with a user unit employing a prototype CLU (without missiles) as early as next year. This will aid in the planned fielding to the EBCT in 2008.

Assessment

- Early component and sensor developmental tests indicate that available technology is sufficiently mature to meet user requirements.
- These capabilities will be demonstrated more completely as flight tests begin in early FY07 and continue through FY09.

Recommendation

1. The Army should continue early user involvement in program development to reduce program risk and enhance the likelihood of a successful IOT.