Lockheed Martin Missile Defense Programs Achieve Significant Milestones In 2011

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BETHESDA, Md., Jan. 17, 2012 /PRNewswire/ -- Lockheed Martin-developed (NYSE: LMT) missile defense system elements achieved 16 significant milestones during 2011, further solidifying the corporation's position as a leader in ballistic missile defense (BMD).

With proven solutions and an unparalleled BMD hit-to-kill intercept record, Lockheed Martin systems address the ascent, midcourse and terminal phases to support the U.S. Missile Defense Agency's (MDA) layered Ballistic Missile Defense System (BMDS) today and into the future.

2011 Milestones for Ballistic Missile Defense System Elements

Aegis Combat System

Aegis is the world's premier combat system and is the foundation for the Aegis Ballistic Missile Defense capability. Aegis-equipped ships are multi-mission surface combatants that can simultaneously attack land targets, submarines and surface ships while automatically implementing defenses to protect the fleet against aircraft and missiles. One hundred Aegis-equipped ships are in service around the globe.

In December, Lockheed Martin submitted its final proposal to the U.S. Navy to provide combat system engineering services, including design, development, integration, test and life cycle support, for Aegis-equipped ships. During the four decades that Lockheed Martin has partnered with the Navy as the Aegis Combat System Engineering Agent, the team has evolved the system 15 times to outpace a wide array of dynamic and evolving threats.

Aegis BMD

The Aegis BMD system is the primary sea-based component of the U.S. missile defense system. Aegis BMD-equipped ships use hit-to-kill technology to intercept and destroy short- and medium-range ballistic missiles. Additionally, Aegis BMD-equipped ships provide surveillance and tracking of intercontinental ballistic missiles, and work with other BMDS elements to provide advanced warning for the defense of the nation, deployed U.S. forces and allies. The current Aegis configuration, Aegis BMD 4.0.1, enables the MDA and U.S. Navy to defeat more sophisticated ballistic missile threats.

In April, the Aegis BMD system successfully tracked and engaged an intermediate range ballistic missile using data from a remote AN/TPY-2 radar during a test off the coast of Hawaii. This marked the Aegis BMD system's first engagement against an intermediate range ballistic missile, as well as the first time the system used a launch-on-remote capability, which allows the Aegis BMD system to employ remote sensors to detect threats as early in flight as possible.

Later this year, construction will begin for the Aegis Ashore deckhouse at the Mission Systems & Sensors site in Moorestown, N.J. Aegis BMD is a foundational element for the planned European Phased Adaptive Approach to missile defense, which includes deployments of both Aegis BMD capable ships and Aegis BMD capabilities in a ground-based Aegis Ashore configuration.

PAC-3 Missile

The Patriot Advanced Capability-3 (PAC-3) Missile is one of the most advanced, capable and reliable theater air defense missiles in the world. Its ability to defeat advanced tactical ballistic and cruise missiles, and fixed- and rotary-wing aircraft, solidifies PAC-3's position as the most technologically advanced missile for the Patriot air defense system.

In November, PAC-3 demonstrated its ability to stay ahead of the evolving threat and remain an extremely capable hit-to-kill weapon by successfully detecting, tracking and intercepting an aerodynamic tactical ballistic missile target in a flight test held at White Sands Missile Range (WSMR). The test included a ripple fire engagement, utilizing a PAC-3 Cost Reduction Initiative (CRI) Missile as the first interceptor and a PAC-3 Baseline Missile as the second interceptor. This flight test completed the validation of PAC-3's latest software and hardware updates.

In February, Lockheed Martin's enhanced version of the combat-proven PAC-3 Missile, the PAC-3 Missile Segment Enhancement (MSE), successfully intercepted a threat representative tactical ballistic missile target in the MSE battle space at WSMR.

THAAD

A MDA program and key element of the nation's BMDS, the Terminal High Altitude Area Defense (THAAD) weapon system defends the U.S., its deployed and allied forces, population centers and critical infrastructure against short- to intermediate-range ballistic missiles. THAAD is the only missile defense system with the operational flexibility to intercept in both the endo- and exo-atmospheres to provide versatile capability to the warfighter.

In December, Lockheed Martin received an undefinitized contract totaling $1.96 billion to produce THAAD for the MDA and the United Arab Emirates. One of the most notable milestones of the year, this contract is also the first Foreign Military Sale (FMS) of the system. The contract includes the production of two THAAD Weapon Systems and additional maintenance and support equipment.

During a flight test in October at the Pacific Missile Range Facility (PMRF) on Kauai, Hawaii, the U.S. Army Test and Evaluation Command, MDA and the U.S. Army challenged THAAD to track, detect and intercept two different targets utilizing two THAAD interceptors – a first for the system. During the successful mission, the THAAD missile system intercepted air-launched and sea-launched short-range ballistic missile targets.

Prior to the successful intercept test, Lockheed Martin received a production contract totaling $789.8 million to produce THAAD for the Missile Defense Agency. The contract included $694.9 million for the production of 48 THAAD interceptors, six THAAD launchers, four fire control units and additional support equipment. An option for additional launchers in the amount of $94.8 million was also awarded for a total value of $789.8 million.

2011 Milestones for Multinational Systems

MEADS

Under development by Germany, Italy and the U.S., the Medium Extended Air Defense System (MEADS) is a mobile system designed to replace Patriot in the U.S., Nike Hercules in Italy and the retired Hawk system in Germany. The system permits full interoperability between the U.S. and allied forces, and is the only medium-range air defense system to provide full 360-degree coverage. MEADS can defend up to eight times the coverage area with far fewer system assets, which allows for a substantial reduction in deployed personnel and equipment, with less demand for airlift.

In November, MEADS successfully demonstrated its ability to engage and defeat a target from any direction using a single launcher during its first flight test held at WSMR. During the test, a PAC-3 MSE MEADS Certified Missile Round was employed along with the MEADS lightweight launcher and battle manager. The test demonstrated an unprecedented over-the-shoulder launch of the MSE missile against a simulated target attacking from behind. The missile executed a planned self-destruct sequence at the end of the mission after successfully engaging the simulated threat. This test was one of three flight tests approved by the National Armaments Directors of Germany, Italy and the U.S. in June as part of a revised set of development objectives for the system.

Prior to the test, the second MEADS launcher, in the German national configuration, completed formal acceptance testing and began system-level integration with other MEADS elements at Pratica di Mare Air Force Base in Italy. A second MEADS battle manager completed acceptance testing at MBDA in Fusaro, Italy, and arrived in Orlando, Fla., for system integration testing in July. This unit was used during the successful flight test in November.

Also in preparation for the November test, MEADS successfully completed a Battle Management Command, Control, Communications and Computers and Intelligence (BMC4I) software design review in Huntsville, Ala., in August. The review validated software design and functionalities needed for upcoming MEADS flight tests and demonstrations.

In January, the initial MEADS launcher and battle manager entered system test and integration at Pratica di Mare Air Force Base after rotation testing in the U.S. This milestone marked the first integration tests involving two completed MEADS system elements. These tests demonstrated MEADS launcher and battle manager functions, including system attachment/detachment in the first demonstration of MEADS plug-and-fight operation.

2011 Milestones for Advanced Technology and Supporting Efforts

Command, Control, Battle Management, and Communications (C2BMC)

Lockheed Martin's Command, Control, Battle Management, and Communications (C2BMC) program is a key component of the U.S.' national missile defense strategy. The program connects and integrates all elements of the nation's missile defense system from sensor to shooter. Operating 24/7, C2BMC continuously supports both regional and strategic objectives around the world in 17 time zones. As leader of the Missile Defense National Team, a consortium of five contractors that operates C2BMC, Lockheed Martin's key responsibilities are to develop and implement the C2BMC architecture, and operate and sustain the system in the field.

The program successfully completed a 10-year contract in 2011, and in December was awarded a follow-on IDIQ contract for the C2BMC program worth an estimated $980 million over five years.

Standard Missile-3 Block IIB

The Standard Missile-3 Block IIB (SM-3 IIB) missile will provide early intercept capability against long-range ballistic missile threats. It will be a key element of the fourth phase of the Phased Adaptive Approach, which will provide enhanced capabilities against threats on a global basis. The missile will be integrated into the Aegis Weapon System, with the Aegis BMD 5.1 Fire Control and the MK 41 Vertical Launching System, as part of the Aegis Ashore capability.

The MDA awarded Lockheed Martin a $43.3 million contract in April for concept definition and program planning for the SM-3 IIB. The 32-month concept definition and program planning phase focuses on defining design objectives, conducting trade studies to establish a technical baseline, reducing technology risk and developing an executable program plan. Lockheed Martin currently performs work in Sunnyvale, Calif., Huntsville, Ala., Moorestown, N.J., and Grand Prairie, Texas.

Lockheed Martin announced in August that it has selected itsCourtland, Ala., facility for future production of the SM-3 IIB. The production facility decision will be part of the bid that Lockheed Martin intends to submit for the MDA's upcoming product development phase for the SM-3 IIB.

Targets and Countermeasures Program

Lockheed Martin's Targets and Countermeasures Program provides a full spectrum of target missiles to test the BMDS, with a focus on threat-representative capabilities for realistic testing and production efficiencies for affordability.

In 2011, Lockheed Martin's Targets and Countermeasures Program successfully provided and launched four target missiles – bringing the company's reliability record to 42 successful target missions out of 43 since 1996. This unmatched 98 percent mission success rate has included unitary and separating targets, spanning land, sea and air launches for testing of the BMDS. It also includes three missions for the new LV-2 Intermediate-Range Ballistic Missile target.

Three Dimensional Expeditionary Long-Range Radar (3DELRR)

Lockheed Martin's fully-functional Three Dimensional Expeditionary Long-Range Radar (3DELRR) prototype is currently tracking air targets as the company awaits the next phase in the U.S. Air Force's acquisition program. The scalable prototype addresses all of the Air Force's 3DELRR requirements and consolidates four Department of Defense long-range surveillance missions into one radar system.

Once fielded, 3DELRR will be the Air Force's principal long-range, ground-based sensor for detecting, identifying, tracking and reporting aircraft and missiles, and will replace the AN/TPS-75 air surveillance radar. The U.S. Marine Corps also is evaluating the system as a replacement for their AN/TPS-59 ballistic missile defense radar.

Missile Defense Leader

Lockheed Martin is a world leader in systems integration and the development of air and missile defense systems and technologies, including the first operational hit-to-kill missile. It also has considerable experience in missile design and production, infrared seekers, command and control/battle management, and communications, precision pointing and tracking optics, as well as radar and signal processing. The company makes significant contributions to most major U.S. missile defense systems, and participates in several global missile defense partnerships.

Headquartered in Bethesda, Md., Lockheed Martin is a global security company that employs about 126,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The Corporation's 2010 sales from continuing operations were $45.8 billion.

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