

**RECORD VERSION**

**STATEMENT BY**

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U.S. ARMY SPACE AND MISSILE DEFENSE COMMAND/  
U.S. ARMY FORCES STRATEGIC COMMAND  
AND  
JOINT FUNCTIONAL COMPONENT COMMAND FOR  
INTEGRATED MISSILE DEFENSE**

**BEFORE THE**

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**Introduction**

Madam Chairman Tauscher, Ranking Member Everett, and Members of the Committee, thank you for your ongoing support of our military and for the opportunity to appear again before this panel. As I shared last year, I do believe that this Committee is a strong supporter of the Army and the missile defense community. This is especially important as we continue to field missile defense capabilities and to continue development of future capabilities for the Nation and our allies. Along with those testifying today, I am an advocate for a strong global missile defense capability.

The Committee is no doubt familiar with my duties and responsibilities as the Army's senior commander for space and missile defense as well as my position as the Commander of the Joint Functional Component Command for Integrated Missile Defense, a part of the US Strategic Command (USSTRATCOM). In this role, I serve as the Joint user representative working closely with the Missile Defense Agency (MDA), other Services, and Combatant Commanders to ensure that our national goals of developing, testing, and deploying an integrated missile defense system are met in an operationally sound configuration.

Madam Chairman, please rest assured that America's Army stands on point to defend our Nation against an intercontinental ballistic missile attack. Our Soldiers continue to be trained and ready to operate the

Ground-based Midcourse Defense (GMD) Element of the Ballistic Missile Defense System (BMDS) at Fort Greely, Alaska, Vandenberg Air Force Base, California, and the 100<sup>th</sup> GMD Brigade's Missile Defense Element at Schriever Air Force Base, Colorado. These Soldiers, as part of the Joint team, continue to serve as our Nation's first line of defense against any launch of an intercontinental ballistic missile toward our shores. I am proud to represent them along with the other members of the Army and Joint integrated missile defense community.

### **United States Strategic Command JFCC-IMD: Planning, Integrating and Coordinating Missile Defense**

The Joint Functional Component Command for Integrated Missile Defense (JFCC-IMD), US Strategic Command's global missile defense integrating element, has been operational for three years. The JFCC-IMD continues to be manned by very capable Army, Navy, Air Force, Marine Corps, and civilian personnel.

USSTRATCOM, through the JFCC-IMD, continues to aggressively execute its mission to globally plan, integrate, and coordinate missile defense operations. Through a deliberate training and exercise program, the JFCC-IMD has improved our collective ability to defend this Nation. While the organization is still maturing, JFCC-IMD continues to lead the Department's transformation toward more robust integrated missile defense capabilities. The Soldiers, Sailors, Airmen, Marines, and Civilians of this Joint warfighting organization execute our mission to plan, integrate, and coordinate global missile defense operations and support by operationalizing new capabilities from MDA, developing global missile defense plans in collaboration with the Geographical Combatant Commanders, and conducting cross-geographical combatant commander

exercises to eliminate seams and gaps in order to maintain a strong defense against advancing threats. In summary, JFCC-IMD continues to build operational competence and warfighter confidence in the execution of our mission.

### *Continued Ballistic Missile Defense System Progress*

This past year has been another year of operational achievement for integrated missile defense. Since the last time I addressed this Committee, the Global Ballistic Missile Defense System has gone from test-bed operations to a system configured to support continuous defensive operations. Whether a test bed with a residual operational capability, or an operational system that supports research and development activities, it is understood that our efforts and decisions must be entirely focused along two lines—operational capability and spiral development of the BMDS system. We balance both fielding of near term and development of long term capabilities to meet the evolving threat to the Homeland. This balance cannot be achieved without comprehensive dialogue between MDA, the Services, and the warfighters—dialogue that is ongoing today and dialogue that must continue in the future.

We are continuing to expand the current ballistic missile defense operational configuration. This past year, the early warning radar at Fylingdales Royal Air Force Base was upgraded to perform the missile defense mission. This radar is a key element of the BMDS for providing the initial limited defense capabilities to counter the emerging ballistic missile threat from Southwest Asia. The radar will also continue to perform its traditional role as an early warning radar. The addition of this radar marks the beginning of the integration of BMDS capabilities across five Combatant Commands to counter simultaneous ballistic missile

threats from two ends of the globe. We expect the warfighting capability provided by such integration of platforms, doctrine, and personnel to continue to grow in the coming years to address emerging threats.

### *Continued Warfighter Contributions to BMDS System Development*

As warfighters, we continue to participate in key BMDS tests to build confidence in the system's capabilities and provide input to future capabilities. For example, the 100<sup>th</sup> Missile Defense Brigade provided a trained and certified crew in support of a successful GMD flight test on September 28, 2007. Their support started with participation in pre-mission training conducted in both Huntsville, Alabama, and at their GMD Fire Control (GFC) consoles at the Missile Defense Element (MDE) at Schriever Air Force Base, Colorado. The crew provided critical expertise that enhanced system performance, assisting the engineers with validation of pre-mission parameters. These pre-mission events culminated with the conduct of the flight test, where the crew provided the Human-In-Control actions necessary for a successful launch and intercept. The Brigade will also support the upcoming GMD flight test. For this flight test, the AN/TPY-2 Forward Based X-Band and Sea Based X-band (SBX) radars will be integrated into the GMD system to validate their operational utility and to provide data for anchoring our modeling and simulation efforts.

Since last year's testimony to this Committee, we successfully intercepted ballistic missiles at low and high altitudes; in midcourse and terminal phases; and in endo- and exo-atmospheric environments with our long-range ground-based interceptor, the Terminal High Altitude Area Defense (THAAD), and several AEGIS Standard Missile-3s (SM-3s). We supported an International BMD Partner with a successful exo-

atmospheric intercept from a Japanese Maritime Self Defense Force Destroyer. Conducting these system level flight and ground tests required the use of operational assets, the same assets that would be used to defend this Nation and our allies against a possible rogue state missile attack. JFCC-IMD worked closely with the Combatant Commanders and MDA to coordinate the availability of these assets to ensure sustained operational readiness during the conduct of the system level tests.

The JFCC-IMD was able to balance the requirements of both operations and tests. This period of robust achievements underscored the warfighter's requirement to expedite development and deployment of a concurrent testing, training, and operations (CTTO) capability. We have made strides but we still have a ways to go. CTTO will permit developers and operators to maintain an operational capability of the BMDS while simultaneously developing, testing, or training on the system. Absent a mature CTTO capability, JFCC-IMD aggressively conducts an asset management process to ensure the highest level of operational readiness during the conduct of materiel development and tests.

### *Continued Advancements in System Capability*

JFCC-IMD, in partnership with MDA and the Services, has integrated additional missile defense sensors and shooters to enhance theater and strategic mission capabilities. We have institutionalized the Operational Readiness and Acceptance (OR&A) process to deliberately activate capabilities by baselining the known capabilities and limitations. Through this process, activation criteria, which are critical to establishing and maintaining capabilities, are clearly defined to ensure sustainable systems are provided to the warfighter.

We continue to refine our processes to ensure the warfighters' desired operational capabilities are considered by the materiel developer. Since I last appeared, the Warfighter Involvement Process, known as the WIP, has matured significantly. Warfighter inputs and subsequent changes to the overall BMD system of systems started slowly but are steadily increasing in effectiveness. After two years of operator generated input, we are now seeing changes incorporated in the BMDS. More significantly, capability requests are being reflected in USSTRATCOM's Prioritized Capability List submissions and in MDA's corresponding Achievable Capabilities List.

A success story in the WIP process is our partnership with MDA, the Services, and the Combatant Commanders in the expansion of the BMD capability into the European theater. In my role as the JFCC-IMD Commander, I have held discussions with the European Command to build stronger partnerships with our Allies should our government conclude agreements for hosting a midcourse radar and interceptor site in Europe. If approved, the expansion of the BMDS into Europe will greatly increase the security of the United States as well as provide a measure of protection to our forward deployed forces and European allies that currently does not exist.

Looking forward, we are engaged with the Department to balance the missile defense portfolio to ensure we are addressing both the threats of today and tomorrow. With more than 20 countries, several of which have an adversarial relationship with the United States, now possessing ballistic missile capability and technology, the threat to the United States and our allies is growing. The missile defense investment portfolio must address the warfighter needs for the near-term threats from these

countries while developing new technologies to deter potential adversaries from their continued investment in ballistic missile technologies.

To guide the planning of a near-term and long-term investment portfolio, the Department is conducting a number of studies, including the latest iteration of the Joint Capability Mix (JCM) Study. The intent of the JCM II Study was to explore and assess aggregate BMDS capabilities and provide analysis in support of determining the appropriate BMDS weapon and sensor mix to address the ballistic missile threat for two near simultaneous major combat operations in the 2015 timeframe. The results of the recently completed study indicate a future need for additional THAAD and SM-3 inventory. With the warfighter analysis, MDA is seeking to identify and allocate sufficient resources to address the requirement during the upcoming Program Objective Memorandum cycle. In addition to the JCM effort, JFCC-IMD is also coordinating an employment strategy of the AN/TPY-2 (aka Forward Based X-Band Radar) to enhance global and regional missile defense capabilities. This employment strategy considers various aspects of military utility and geopolitical concerns to inform leadership toward a decision. Other efforts that impact force structure and inventory requirements include various wargames and exercises to define the future operational concepts, including wargames with our Allies.

### ***Taking Care of our Warfighters***

If we receive approval to proceed with a European capability, we need to ensure we provide quality facilities and services to our Soldiers. If built, the European capability will most certainly be an enduring mission. The mission support infrastructure (barracks and morale and welfare facilities) is just as important to mission success as the hardware the



Soldiers will operate. We believe that the mission support facilities “outside the wire” are an integral part of the overall system. The investment in mission support infrastructure contributes immensely to the overall reliability of the system and the cost represents a very low percentage of the overall system construction and fielding cost.

We should continue to work to improve the quality of life at our missile defense garrison at Fort Greely, Alaska. Soldiers in the 49<sup>th</sup> Missile Defense Battalion of the Alaska Army National Guard continue to defend the United States from ballistic missile attack from the remoteness of Fort Greely, Alaska. They continue to do so in an outstanding manner, without complaint, in an environment with infrastructure that does not meet current standards. While the Army is taking proactive steps to improve the quality of life at Fort Greely, the isolation of this remote location cannot be overstated. On the positive front, the Army recently awarded a contract to privatize the family housing at Fort Greely—Soldiers and their Families should start to realize significant housing improvements in the near future. Also, the Army is currently planning to replace an existing substandard fire station with one that will provide adequate coverage for Fort Greely’s population and infrastructure. Challenges still remain as there is very limited support in the local community with respect to medical and dental care, special education needs, higher education opportunities, restaurant establishments, and other services that the vast majority of us take for granted. For example, the nearest medical specialist is over two hours away. This is very problematic, especially when one considers the extreme weather during the winter months. Our Soldiers and their Families deserve more—we need to provide the adequate facilities and the services they need. The Army will continue to address these

challenges to ensure better living conditions are realized for our Soldiers and their Families.

### **Army Infrastructure Contributions**

The Army also provides key test range assets for BMDS research and development. In addition to providing other vital Department capabilities, these unique facilities continue to serve as key BMDS system enhancers for MDA. The United States Army Kwajalein Atoll/Reagan Test Site (USAKA/RTS) in the Republic of the Marshall Islands has been instrumental in the development and testing of the GMD system. USAKA/RTS will continue to serve as a significant test bed for future BMDS technology development. Also, within the BMDS arena, the High Energy Laser Systems Test Facility on White Sands Missile Range, New Mexico, is serving as a key lethality test bed for MDA's Airborne Laser Program. We ask for your continued support to ensure these vital testing ranges are postured to perform necessary BMDS testing.

### ***Air and Missile Defense—an Overview of the Fiscal Year 2009 Army Budget Submission***

In addition to deploying the BMDS, MDA, the Services, and the Combatant Commanders continue to focus on improving theater air and missile defense capabilities. GMD and Theater Air and Missile Defense Systems are vital for the protection of our homeland, deployed forces, friends, and allies. Air and missile defense is a key component in support of the Army's core competency of providing relevant and ready land power to Combatant Commanders.

As the Secretary and Chief of Staff of the Army have previously testified, the Army is stretched after years of operating at war. To relieve the stress on the force, the Army is embarking on a path to restore balance. The Army's plan centers on four imperatives—sustain, prepare, reset and transform. As we have seen with other Army combat capabilities, the requirement for air and missile defense units continues to grow, stretching the force. Operation Iraqi Freedom consumes significant quantities of our key missile defense capabilities, leaving other worldwide commitments under-resourced.

Already well underway, the Army has created composite air and missile defense battalions to transform the Air Defense Artillery into a more responsive and agile organization. These battalions address capability gaps, permitting us to defeat cruise missiles and unmanned aerial vehicles while maintaining our ability to defend critical assets from the ballistic missile threat. Composite air and missile defense battalions will capitalize on the synergies of two previously separate disciplines—short-range air and missile defense and high-to-medium altitude air and missile defense. Additionally, the Army has pooled air defense artillery battalions at the theater-level to provide air and missile defense protection based on the situation and mission requirements. This pooling concept supports the Army's effort to move to modular designs that allow force tailoring of units better sized to meet the Combatant Commander's needs.

With that as a brief background, let me now focus on the Army's Fiscal Year 2009 budget submission for air and missile defense systems. The recently submitted President's Budget includes approximately \$2.23 billion with which the Army proposes to execute current Army air and missile defense responsibilities and focus on future development and enhancements of both terminal phase and short-range air and missile

defense systems. In short, the Army is continuing major efforts to improve the ability to provide warning, acquire, track, intercept, and destroy theater air and missile threats.

### *Army Integrated Air and Missile Defense (IAMD) System of Systems (SoS)*

In order to enhance its ability to destroy theater air and missile threats, the Army is continuing to transform its air and missile defense force from its traditional system-centric architecture to an integrated, component-based, IAMD SoS. The Army IAMD SoS Program provides full, network-centric, plug-and-flight integration of existing and future air and missile defense systems and enables their full technical, functional, and procedural integration into the Joint IAMD arena. This modularization of air and missile defense capabilities will allow Joint Force Commanders to scale and tailor air and missile defense components functioning interdependently to deliver operational capabilities not achievable by the individual elements of the system. Given the diversified air and missile threat set and the limited resources to address the threat, development of IAMD SoS is the Army's top air and missile defense priority.

In addition to the IAMD SoS interdependent capabilities, the Army's air defense community has initiated plans to meet the future challenges and demands, taking steps to sustain, prepare, reset, and transform our forces and equipment. These plans entail three main component areas of the Army's air and missile defense construct—terminal phase ballistic missile defense, cruise missile defense, and force protection.

### *Terminal Phase Ballistic Missile Defenses*

The PATRIOT/Medium Extended Air Defense System (MEADS) capability is designed to counter theater ballistic missile threats in their terminal phase in addition to cruise missiles and other air-breathing threats. Combining these systems with the soon to be deployed Terminal High Attitude Area Defense (THAAD) system brings an unprecedented level of protection against missile attacks to deployed U.S. forces, friends, and allies well into the future.

### *PATRIOT/PATRIOT Advanced Capability-3 (PAC 3) Overview*

PATRIOT is the world's only battle proven theater AMD system and will be a key AMD element for the next two decades, providing Combatant Commanders with modular, scalable, mission-tailored capabilities to greatly enhance operational force protection in support of the Joint team. The PATRIOT is the Nation's only deployed, land-based, short-to-medium range BMDS capability.

The Army recognized that the PATRIOT force was heavily stressed and therefore developed a strategy to Grow-the-Force through a combination of pure-fleeting the existing PATRIOT force to PAC-3 capability and standing up two additional PAC-3 battalions. This strategy will increase our capacity to handle today's threat and alleviate logistical and training challenges of maintaining two separate PATRIOT configurations. Pure-fleeting of the PATRIOT force with PAC-3 will allow for improved capability and higher lethality against the Theater Ballistic Missile (TBM) and non-TBM threat as well as enable commonality across all Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel and Facilities (known as DOTMLPF) domains in the PATRIOT force. Also, the additional two battalions of PATRIOT PAC-3 capability will meet the growing demands of the Combatant Commanders to provide

global AMD against the entire threat set. Fiscal Year 2007 reprogramming actions and Fiscal Year 2008 funding initiated this strategy—funding in the amount of \$492.8 million in the Fiscal Year 2009 budget request will complete these initiatives and continue PATRIOT modifications.

Last year, my statement addressed the ongoing PATRIOT fixes to operational deficiencies that were deemed necessary as a result of friendly fire incidents. The Army has taken steps to address lessons learned and correct the deficiencies. Based on the current fielding schedule, all Operation Iraqi Freedom fixes will be completed during Fiscal Year 2009.

#### *Medium Extended Air Defense System (MEADS) Overview*

A top Army priority system for defense against short- and medium-range tactical ballistic missiles and air breathing threats, the MEADS system will be an integral part of the Army Integrated AMD System of Systems and capable of operating within a Joint and coalition operational environment. The system will provide wide-area protection at strategic, operational, and tactical levels.

MEADS, a cooperative development program with Germany and Italy, will provide a lighter, more deployable, maneuverable, lethal, network-centric AMD capability. The program also includes development of the PAC-3 Missile Segment Enhancement (MSE) as the objective tri-national MEADS missile. The PAC-3 MSE is currently under development and will be integrated into the MEADS program. The MSE missile will provide a more agile and lethal interceptor that expands the engagement envelope of this system. The Fiscal Year 2009 budget request includes funding for MSE initial production facilities—production of the MSE is

scheduled to begin in 2010. Fielding of MEADS is scheduled to begin in 2015 and be completed by 2028. We are confident that this path will provide our forces, allies, friends, and our Nation with the most capable air and missile defense system possible.

### *Terminal High Attitude Area Defense System Overview (THAAD)*

#### *Overview*

The Department of Defense is committed to fielding an advanced capability to defend against tactical ballistic missiles as soon as possible. THAAD is designed to provide a layered theater ballistic missile defense in support of the short and medium range ballistic missile threat. MDA is funding and manufacturing four THAAD batteries for the Army in an accelerated fielding that will commence in 2009. THAAD capabilities will begin to transfer to the Army in 2009. Synchronization between the Army and MDA is crucial in both the development and funding areas in order to ensure that the transition delivers a supportable warfighting system.

To fully optimize the performance of the PATRIOT, MEADS, and THAAD defense systems, effective personnel training and development is essential. The United States Army Fires Center of Excellence at Fort Sill, Oklahoma, will provide our Nation with the best trained, organized, and equipped Air Defense Artillery leaders and units in response to current operational needs and future force warfighting concepts.

### *Joint Tactical Ground Station (JTAGS)*

JTAGS is a transportable information processing system that receives and processes in-theater, direct down-linked data from Defense Support Program satellites. JTAGS provides our commanders with early warning of ballistic missile attack and essential information to defeat

TBMs. The system disseminates warning, alerting, and cueing information on TBMs, and other tactical events of interest throughout the theater using existing communications networks. JTAGS determines the TBM source by identifying missile launch point and time and provides an estimation of impact point and time. Since the system is located in-theater, it reduces the possibility of single-point-failure in long-haul communication systems and is responsive to the theater commander. JTAGS also fulfills the in-theater role of USSTRATCOM's Theater Event System (TES). It is imperative that JTAGS be funded to integrate and evolve to use the next generation of Space Based Infrared System sensors. This will significantly enhance warning accuracy and timeliness while improving all aspects of theater missile defense. We request your continued support of this essential capability.

### *Cruise Missile Defense*

Our adversaries understand the value of cruise missiles. They are inherently very difficult targets to detect, engage, and destroy, and when armed with a weapon of mass destruction warhead, the effects from a cruise missile are catastrophic. The Army's Cruise Missile Defense Program is an integral element of the Joint cruise missile defense architecture. We are also working closely with the Joint community to assure development of doctrine that synchronizes our military's full capabilities against the cruise missile threat. Critical Army components of the Joint cruise missile defense architecture are provided by the Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS), the Surface-Launched Advanced Medium Range Air-to-Air Missile (SLAMRAAM), and the PATRIOT MSE missile. These systems are on schedule to provide an initial operational capability by 2012.



Additionally, these systems will be networked within the IAMD SoS architecture, have an integrated fire control capability and operate within a common command and control system. Initial operational capability is planned for 2014.

### *Force Protection*

In the conduct of Operation Iraqi Freedom, insurgents continue to pose serious dangers by employing indirect-fire tactics of quick-attack, low-trajectory, urban-terrain-masked rocket, artillery, and mortar (RAM) strikes against U.S. forward operating bases in Iraq. To combat this threat, the Army developed a Counter-Rocket, Artillery, Mortar (C-RAM) capability—an integrated set of capabilities to provide warning and intercept of RAM threats. The primary mission of the C-RAM project is to develop, procure, field, and maintain a capability that can detect RAM launches; warn the defended area with sufficient time for personnel to take cover; intercept rounds in flight, thus preventing damage to ground forces or facilities; and enhance response to and defeat of enemy forces. C-RAM utilizes a system of systems approach and is comprised of a combination of multi-service fielded and non-developmental item sensors, command and control elements, and a modified U.S. Navy intercept system. The system utilizes a low cost commercial off-the-shelf warning system and a wireless local area network. Advances in the C-RAM capability will continue with funding that is requested in the Fiscal Year 2009 budget submit.

Efforts are also underway to use the benefits of directed energy to potentially counter the RAM threat. Developmental work by joint entities within the Department is producing results that are promising. Within the

next few years, through the Army's High Energy Laser Technology Demonstration Program, we are very hopeful we will produce a mobile solid state laser weapon system that will serve as a complementary resource to the present and future kinetic energy capability in countering RAM projectiles. Your continued support in this area will ensure we advance indirect fire protection capabilities.

### **Conclusion**

Madam Chairman, the Army is a member of the Joint team fighting an adaptive enemy in a persistent conflict while transforming to meet future threats. We have responsibility for GMD, THAAD, PATRIOT, and MEADS and will continue developing and fielding an integrated missile defense for our Nation, deployed forces, friends, and allies.

USSTRATCOM, through the JFCC-IMD, will continue to develop a Joint BMDS capability to protect our Nation, deployed forces, friends, and allies. The Fiscal Year 2009 budget proposal supports the transformation of the Army's air, space, and missile defense force to support the Army's future force, the Joint Integrated AMD System, and our global BMDS. We will continue to work with MDA, the Services, and Component Commanders to define the characteristics of the emerging air, space, and missile defense force and determine how it can best support the warfighter and our Nation.

I appreciate having the opportunity to speak on these important matters and look forward to addressing any questions you or the other Committee members may have.