

RECORD VERSION

STATEMENT BY

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ARMY FORCES STRATEGIC COMMAND
AND
JOINT FUNCTIONAL COMPONENT COMMAND FOR
INTEGRATED MISSILE DEFENSE**

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and
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Integrated Missile Defense**

Mr. Chairman, Ranking Member Cooper, and distinguished Members of the Subcommittee, thank you for your continued support of our Service Members, Civilians, and Families. I appear before you today bringing both a Joint and Army perspective for effective missile defense capabilities. We appreciate this Subcommittee's continued support of the Army, the U.S. Strategic Command, the Department of Defense, and the missile defense community. It is an honor and privilege to testify before this Subcommittee along with these distinguished witnesses who bring missile defense capabilities to our Nation, forward deployed forces, partners, and allies.

I have three main responsibilities. First, as the Commander of the U.S. Army Space and Missile Defense Command (USASMDC), I have Title 10 responsibilities to train, maintain, and equip space and global ballistic missile defense forces for the Army. Second, as the Commander, Army Forces Strategic Command (ARSTRAT), I am the Army Service Component Commander (ASCC) to the U.S. Strategic Command (USSTRATCOM). I am responsible for planning, integrating, and coordinating Army forces and capabilities in support of USSTRATCOM missions. Third, as the Commander of USSTRATCOM's Joint Functional Component Command for Integrated Missile Defense (JFCC IMD), I am responsible for synchronizing missile defense planning, conducting ballistic missile defense operations support, and advocating for missile defense capabilities for the Warfighter.

In accordance with these responsibilities, my intent today is threefold: to highlight USASMDC/ARSTRAT's missile defense force provider responsibilities with respect to the Army and the Geographic Combatant Commanders (GCCs); to outline JFCC IMD's role as an operational integrator of Joint missile defense for USSTRATCOM; and to summarize key Army ballistic missile defense activities and developments.

The Strategic Environment

Ballistic missile threats from regional actors such as North Korea and Iran are increasing, both quantitatively and qualitatively, and are likely to continue to grow over the next decade. In a resource constrained environment, we must be prepared to quickly adapt and confront various threats. Holistic strategies that effectively integrate offensive and defensive capabilities are essential. It is of utmost importance that we prioritize missile defense resources to optimize these capabilities for the Warfighter.

To meet the objectives of the current Defense Strategic Guidance, USSTRATCOM and the Army continue to provide and enhance homeland and regional missile defense. We have worked with partners in U.S. Pacific Command (USPACOM), U.S. Northern Command (USNORTHCOM), and USSTRATCOM to review and improve our capabilities in the USPACOM area of responsibility in accordance with the Department's strategy to rebalance toward the Asia Pacific region. The deployment of a Terminal High Altitude Area Defense (THAAD) battery to Guam has enhanced our

Ballistic and cruise missiles “have the potential to pose catastrophic threats that could directly affect our Nation’s security and prosperity.”

***-- U.S. Defense Strategy
January 2012***

ability to protect U.S. territories in the region and signal our commitment to our regional partners. The March 2013 Secretary of Defense (SECDEF) announcement of the deployment of 14 additional Ground-Based Inceptors at Fort Greely, Alaska and

a second missile defense sensor in Japan will provide improved capability and capacity to defend the Nation against a limited ballistic missile attack. Toward this end, we continue to work with regional partners and allies to increase our information and data sharing.

The Defense Strategic Guidance also establishes a priority to maintain a strong commitment to security and stability in Europe and the Middle East. We are continuing to build capability and capacity in these regions consistent with the objectives of the Phased Adaptive Approach to regional missile defense. To further protect our allies and

partners in these regions, the Army has deployed additional Patriot air and missile defense forces to Turkey and Jordan.

In summary, the growing complexity of the strategic environment based on technological advances of the threat and fiscal realities require cost efficient and effective methods of integrating current and future capabilities. We will continue to partner with the Missile Defense Agency (MDA) and Combatant Commands to ensure we pursue a fiscally responsible path to keep pace with evolving threats by identifying and prioritizing capability additions that provide the greatest operational value.

The Workforce—Recognizing and Protecting Our Greatest Asset

These challenges I've highlighted cannot be mitigated without the dedication of our greatest asset—our people. During the DoD Space hearing before this Subcommittee a few weeks ago, I felt it appropriate to highlight our workforce and the Army's commitment to deter instances of sexual harassment and assault. At USASMDC/ARSTRAT and JFCC IMD, our people are our most enduring strength. The Service Members, Civilians, and Contractors at USASMDC/ARSTRAT and JFCC IMD support the Army and Joint Warfighter each and every day, both those stationed in the homeland and those deployed across the globe. Within USASMDC/ARSTRAT and JFCC IMD, we remain committed to providing trained and ready Service Members and Civilians to operate and pursue enhanced system capabilities for the Nation's ballistic missile defense system (BMDS).

In step with the Army, our USASMDC/ARSTRAT and JFCC IMD leadership team embraces the imperatives of Sexual Harassment / Assault Response and Prevention (SHARP). As stated by the Chief of Staff of the Army, sexual harassment and sexual assault violate everything the U.S. Army stands for, including our Army Values and Warrior Ethos. At USASMDC/ARSTRAT, I will continually assess the effectiveness of our SHARP efforts to ensure we are meeting the needs of our Soldiers, Civilians, and family members. Our workforce deserves nothing less.

Accomplishment of Missile Defense Tasks

USASMDC/ARSTRAT, a force provider for missile defense capabilities, is a split-based command with dispersed locations around the globe that are manned by multi-component Soldiers, Civilians, and Contractors. Organizations around the world, including USTRATCOM, USNORTHCOM, and the GCCs leverage our capabilities. Our Title 10 responsibilities include operations, planning, integration, control, and coordination of Army forces and capabilities in support of USSTRATCOM's missile defense mission. USASMDC/ARSTRAT also serves as the Army's global operational integrator for missile defense, the Army's proponent for global missile defense force modernization, and the Army's technical center lead to conduct air and missile defense related research and development in support of Army Title 10 responsibilities.

Our operational function is to provide trained and ready missile defense forces and capabilities to the GCCs and the Warfighter which address today's requirements.

“Homeland defense and support to civil authorities require strong, steady-state force readiness, to include a robust missile defense capability.”

***-- Priorities for 21st Century Defense
January 2012***

For example, USASMDC/ARSTRAT Soldiers, serving in the homeland and in remote and austere forward deployed locations operate the Ground-Based Midcourse Defense (GMD) system and the Army Navy / Transportable Radar Surveillance Forward-Based Mode (AN/TPY-2

FBM) radars. A summary of the ongoing missile defense capabilities provided by our missile defense professionals is highlighted below.

Support to Global Ballistic Missile Defense (BMD): Soldiers from the 100th Missile Defense Brigade, headquartered in Colorado Springs, Colorado, and the 49th Missile Defense (MD) Battalion, headquartered at Fort Greely, Alaska, remain ready, 24/7/365, to defend our Nation and its territories from a limited intercontinental ballistic missile attack. Under the operational control of USNORTHCOM, Army National Guard and active component Soldiers operate the GMD Fire Control Systems located at the Fire Direction Center in Alaska, the Missile Defense Element in Colorado, and the GMD Command Launch Element at Vandenberg Air Force Base, California. These Soldiers,

in conjunction with JFCC IMD and USNORTHCOM, also oversee the maintenance of GMD interceptors and ground system components. At the Fort Greely site, 49th MD Battalion military police secure the interceptors and communications capabilities at the Missile Defense Complex from physical threats. The GMD system remains our Nation's only defense against a limited ICBM attack.

Support to Regional Capabilities: The 100th Missile Defense Brigade also supports GCCs with AN/TPY-2 FBM radar detachments and provides subject matter expertise on operator training and certification. These operational capabilities are present today at strategic locations around the globe.

GMD System Test and Development: In addition, soldiers from the 100th MD Brigade actively participate in GMD test activities and continue to work with Missile Defense Agency (MDA) developers on future improvements to the GMD system.

Ballistic Missile Early Warning: In support of the Joint Force Commander's theater force protection, USASMDC/ARSTRAT continues to provide ballistic missile early warning within various theaters of operations. The 1st Space Brigade's Joint Tactical Ground Station (JTAGS) Detachments, under the operational control of USSTRATCOM's Joint Functional Component Command for Space, but operated by USASMDC/ARSTRAT space-professional Soldiers, monitor enemy missile launch activity and other infrared events. They provide essential information to members of the air, missile defense, and operational communities. Our JTAGS Detachments are globally forward, providing 24/7/365, dedicated, assured missile warning to USSTRATCOM and GCCs in support of deployed forces.

Our second major task is to build and mature future missile defense forces—our capability development function. These are the missile defense capabilities we will provide tomorrow. A major component of our capability development function is to train Army Soldiers on missile defense systems. During the past year, USASMDC/ARSTRAT trained over 350 Soldiers and recertified as an Army Learning Institution of Excellence for missile defense training.

***Providing Greater Missile
Defense Capabilities to
Future Warfighters***

The Army uses established and emerging processes to document its missile defense needs and pursue Army and Joint validation of its requirements. As a recognized Army Center for Analysis, USASMDC/ARSTRAT conducts studies to determine how best to meet the Army's assigned missile defense responsibilities. With this information, we develop the Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, and Facilities (DOTMLPF) domains to mitigate threats and vulnerabilities for MDA-developed GMD and AN/TPY-2 FBM missile defense systems. This disciplined approach helps to ensure limited resources are applied where Warfighter operational utility can be most effectively served.

In our third major missile defense task, USASMDC/ARSTRAT provides critical technologies to address future needs that will enhance Warfighter effectiveness—our materiel development function. In USASMDC/ARSTRAT, our technology development function is primarily focused on space and high altitude. While MDA is the principal materiel developer for ballistic missile defense, USASMDC/ARSTRAT has a number of ongoing missile defense related materiel development efforts, to include ongoing research and development of an OSD sponsored conventional offensive strike capability to address ballistic missile threats. A brief summary of two of these research and development efforts, as well as an overview of an essential Army testing range, follows.

High Energy Laser Mobile Demonstrator: As we have repeatedly witnessed during conflicts in both Iraq and Afghanistan, insurgents pose serious dangers to U.S. forward operating bases by employing quick-attack, low-trajectory, rockets, artillery, and mortar (RAM) strikes. The technology objective of the High Energy Laser Mobile Demonstrator (HEL MD) is to demonstrate a solid-state laser weapon system that will serve as a complementary kinetic energy capability in countering RAM projectiles. This directed energy weapon system will also have a significant capability against unmanned aerial vehicles (UAVs). An initial demonstration was recently completed against short range mortars, UAVs, and UAV-mounted intelligence, surveillance, and reconnaissance sensors. This demonstration served as a risk reduction for future subsystem development and integration while advancing this technology effort to a 50 kilowatt demonstration in 2017. The 50 kilowatt HEL MD will consist of a ruggedized and

supportable high energy laser with subsystems installed on a tactical military vehicle to enhance the safety of deployed forces. The synergy of both directed and kinetic energy systems has the potential to enhance significantly our homeland defense capabilities, particularly against cruise missile and indirect fire threats.

Low-Cost Target Development: The Army continues to pursue a technology effort to develop a suite of low cost targets for the Patriot testing program. The intent is to design threat-representative targets at a substantially reduced cost for short-range ballistic missile testing. Over the past year, using existing excess solid rocket motors, the Army realized significant savings within its operational testing account. The Army will continue to leverage technology advancements in order to realize less expensive targets that are representative of actual threats.

Missile Defense Testing: USASMDC/ARSTRAT operates the Ronald Reagan Ballistic Missile Test Site (RTS). RTS, located on the U.S. Army Garrison - Kwajalein Atoll in the Republic of the Marshall Islands, is critical to both offensive and defensive missile testing requirements, such as the GMD system and the U.S. Air Force strategic ballistic missile systems. In addition to their testing mission, personnel at the Reagan Test Site conduct continuous operational space surveillance and object identification missions.

Joint Functional Component Command for Integrated Missile Defense— Synchronizing Missile Defense Operational Level Planning and Support

The Joint Functional Component Command for Integrated Missile Defense, or JFCC IMD, is USSTRATCOM's missile defense integrating element and has been operational for nine years. Like the other Joint Functional Component Commands, JFCC IMD was formed to operationalize USSTRATCOM missions and allow the headquarters to focus on integration and advocacy. Headquartered at Schriever Air Force Base in Colorado Springs, Colorado, the JFCC IMD is manned by professional Army, Navy, Air Force, Marine Corps, Civilian, and Contractor personnel.

As the SECDEF and various Combatant Commanders have previously testified, the Warfighter remains confident in our ability to protect the Nation against a limited ballistic missile attack, even in the face of the changing fiscal environment. We are

actively engaged with MDA and the Combatant Commanders to optimize and execute the Administration's plan to increase the number of ground-based interceptors (GBIs) at Fort Greely from 26 to 40 and to deploy a second AN/TPY-2 FBM radar to Japan.

We have collaborated with USNORTHCOM, USSTRATCOM, and MDA to identify homeland interceptor sites that best meet operational requirements. The four sites recommended for Environmental Impact Statement analyses have been provided to this subcommittee. The operational contributions of a third interceptor site can vary based on the overall level of improvement to the strategic BMDS. Although MDA continues the planning work necessary to implement this measure, I recommend the priority of investment should be to programs that improve discrimination and tracking capabilities and overall GBI system reliability.

On behalf of USSTRATCOM, JFCC IMD is working across the military enterprise to increase the integration of existing capabilities in order to maximize efficiency and effectiveness to protect the homeland, our deployed forces, partners, and allies. The key force multiplier is "integration", which is a critically important mission area for JFCC IMD and directly supports USSTRATCOM's assigned Unified Command Plan (UCP) responsibilities for missile defense.

***Defense of the Homeland
Priority Requires Execution
of a Holistic Global Missile
Defense Plan***

As an operational and functional component command of USSTRATCOM, JFCC IMD has derived five key mission tasks from the USSTRATCOM UCP responsibilities:

- Synchronize operational level planning, integrate security cooperation activities, and recommend allocation of forces via the global force management process.
- Conduct operations support and asset management for missile defense forces and provide alternative execution support.
- Integrate Joint BMD training, exercises, and test activities.
- Advocate for future capabilities, conduct analysis and assessments, and recommend the operational acceptance of missile defense capabilities into the architecture.

- Provide information system security and network support to assure a reliable BMDS communications network.

To accomplish each of these five mission tasks, we maintain close collaborative relationships with the GCCs, MDA, the Services, the Office of the Secretary of Defense (OSD), the Joint Staff, and our allies. Through collaborative processes, we continually add to our deployed capability while gaining operational experience and confidence in our collective ability to defend our Nation, deployed forces, partners, and allies.

Following, I will highlight some of our collaborative efforts to enhance missile defense planning and capabilities for both the homeland and regional architectures.

Expansion and Integration of the Missile Defense Architecture: In response to the changing strategic environment, the SECDEF directed us to bolster homeland and regional missile defense capabilities. In addition to the previously deployed AN/TPY-2 FBM radars and deployment of the THAAD battery to Guam, we are finalizing the plan to deploy an additional FBM radar in the PACOM area of responsibility, and we are

expanding our missile defense collaboration with allies. We are maturing the European Phased Adaptive Approach (PAA) with the forward deployment and stationing of Aegis BMD ships in Rota, Spain, developing the Aegis Ashore site in Romania, and continuing the

“The United States will continue to defend the homeland against the threat of limited ballistic missile attack”.

*--Ballistic Missile Defense Review
February 2010*

production of the SM-3 IB interceptors. Given many of the challenges associated with implementation of these architectures, JFCC IMD, supporting USSTRATCOM as the global synchronizer for missile defense, is collaborating with the GCCs to assess and address the cross regional gaps in the areas of planning, policy, capabilities, and operations.

Global Assessment: As regional phased adaptive approaches mature, and with homeland defense at the forefront, JFCC IMD collaborates closely with the GCCs to assess the level of risk associated with the execution of their operational plans given their allocation of BMD capabilities. The overall assessment serves to shape

recommendations for global force management and advocacy efforts for future capability investments. We have completed the 2013 Global IAMD Assessment and are currently conducting the 2014 assessment. For the 2013 assessment, we expanded the previous BMD-only assessment to look at integrating both air and missile defense assets to more accurately reflect the way we fight and the associated operational risks.

With regard to regional threats, JFCC IMD assessments indicate that addressing missile defense threats will remain a challenge. Our research, supported by the 2013 Global Assessment, reinforces the fact that GCC demands for missile defense capabilities exceed the available BMD inventory. We must continue to address this mismatch using mobile and re-locatable missile defenses and a comprehensive force management process. We also possess a full spectrum of offensive and defensive capabilities to deter and defend against the ballistic missile threat.

Global Force Management: The increasing demand of BMD assets is managed by the Joint Staff and the Services. USSTRATCOM, as the designated Joint Functional Manager for missile defense, relies upon JFCC IMD to evaluate and recommend sourcing of BMD requirements based on assessed risk. Due to the high demand, low-density nature of missile defense assets, all sourcing decisions have a direct and significant impact to other combatant commanders' campaign and contingency plans. The Global Force Management process enables senior leaders to make more informed BMD sourcing decisions based on global risk.

Multi-Regional BMD Asset Management: JFCC IMD, in coordination with USSTRATCOM and the GCCs, manages the availability of missile defense assets to balance operational readiness postures, scheduled and unscheduled maintenance activities, and MDA and Services' test requirements. This important process allows us to continually assess our readiness to defend against a ballistic missile attack and to recommend adjustments to optimize the overall BMD architecture.

Training, Exercises, and War Games: JFCC IMD continues to focus on the integration of allies into regional missile defense architectures. We leverage training,

“The United States will seek to lead expanded international efforts for missile defense.”

***--Ballistic Missile Defense Review Report
February 2010***

exercises, and war games to increase dialogue and partnership. We are underway with Nimble Titan 14, our biannual multinational BMD war game. While budget constraints have caused us to reduce the scale for regional exercise from interactive war games to table-top exercises, we are still able to accomplish many of the stated objectives. For the first time, Nimble Titan 14 will include the participation of the Kingdom of Saudi Arabia, the United Arab Emirates, Turkey, Estonia, Norway, Sweden, and Finland. In addition to NATO, we anticipate over 20 participating nations and a large number of international observers. Our campaign goals for this iteration of Nimble Titan will advance national policy objectives by helping mature NATO's new missile defense mission area; explore options for increased regional multilateral BMD cooperation; and openly work coalition BMD issues with Middle East nations. We continue to focus on cross-regional coordination, offense/defense force integration, sensor integration, and multinational BMD planning solutions.

The Nimble Titan war game is an invaluable medium to advance U.S. missile defense policy. The war game allows us to mature cooperative relationships with our allies and partners as well as advance our Nation's and combatant command's regional security objectives. This event is critical to developing a common understanding of policy hurdles associated with combined BMD architectures. Conclusions derived from training, exercises, and war games will continue to shape our recommendations on asset allocation, resources, and operational planning through the existing DoD and missile defense community management structures.

Joint BMD Training: In August 2012, the DoD designated USSTRATCOM as the lead for integrating and synchronizing Joint BMD training. This designation mandated the transfer of missile defense training resources and responsibilities from MDA to USSTRATCOM by the end of fiscal year 2013. JFCC IMD is executing this mission on behalf of USSTRATCOM and declared initial operating capability on October 1, 2013.

In coordination with USSTRATCOM, the Joint Staff, Combatant Commands, and the Services, we have developed a comprehensive program of actions and milestones to achieve a full operating capability with the creation of a Joint BMD training center of excellence by the end of next fiscal year. The center of excellence will be located in Colorado Springs and will coordinate and synchronize all aspects of BMD training and

education to further develop Commanders, Warfighters, and Civilians engaged in BMD planning and operations. This approach builds upon existing capabilities and closes gaps between Service, Joint, and regional BMD training and education. As part of the center of excellence construct, our training capability will evolve into a “blended learning/higher education” approach to improve efficiency and reduce the cost of providing Joint BMD training and education.

Warfighter Acceptance and Integrated Master Test Plan: As the missile defense architectures matures, operators call for a credible, comprehensive assessment of new capabilities to inform Warfighter operational acceptance. In 2013, the DoD conducted a new regional operational test that assessed the integrated capability of Aegis BMD, AN/TPY-2 FBM, and THAAD. This first-of-its-kind test validated the THAAD’s integrated regional capability against multiple threats in an operationally realistic environment. Our next operational test in fiscal year 2015 will build upon the success of the previous test. We plan to conduct an integrated test of key elements of EPAA Phase II, specifically the integrated capability in AN/TPY-2, Aegis BMD, and Aegis Ashore. Additionally, JFCC IMD is working closely with MDA, the Office of the Director, Operational Test and Evaluation, and USNORTHCOM to address issues uncovered in recent GBI testing of both the CE-I and CE-II variants. Although the investigation into last year’s CE-I flight test failure is not complete, the early indications provide assurance that technological remedies are being instituted for the GBI fleet. We will continue to partner with the MDA to ensure we maintain an annual test cadence to maintain Warfighter confidence.

In summary, JFCC IMD serves an integrating role for missile defense across multiple regions as we operationalize new capabilities, evolve command relationships, and reinforce our missile defense partnerships with allies. In view of worldwide events and current fiscal challenges, JFCC IMD remains focused on our key mission task to collaborate with the GCCs and MDA to posture our forces to meet current and future ballistic missile threats. Our missile defense capability continues to strengthen as Warfighters gain increased competence and confidence in the BMD System. While work remains to be done, we have made significant progress in evolving the global

missile defense capabilities, thereby strengthening the defense of the homeland, and advancing our partnerships with allies in this pressing endeavor.

Army Contributions to the Nation's Missile Defense Capabilities

The Army is a close partner with the MDA in supporting its materiel development efforts. We continue to develop and field systems that are integral to our Nation's air and missile defense capabilities. A summary follows of the Army's major air and missile defense systems, aligned within the Assistant Secretary of the Army for Acquisition, Logistics, and Technology organizational structure.

Army Integrated Air and Missile Defense (IAMD): Air and missile defense (AMD) is an enduring Army core function and an essential component of the Army mission to provide wide area security. To meet this mission, the 2012 Army AMD Strategy details a plan of action to develop a comprehensive portfolio of IAMD capabilities intended to provide protection against the expanding threat of ballistic and cruise missiles, unmanned aerial systems, and long-range, precision rocket, artillery, and mortar attacks.

Within the AMD arena, the IAMD Battle Management Command System (IBCS) remains the Army's highest priority effort and serves at the foundation for Army AMD modernization. The program will field a common mission command system to all echelons of Army AMD forces to defend against rockets, artillery, and mortars; cruise missiles; manned and unmanned aircraft; air-to-ground missiles; and tactical ballistic missiles. IBCS provides a comprehensive solution for the AMD gap by coordinating air surveillance and fire control across Services and with coalition partners. During this past year, Soldiers demonstrated incremental capabilities of IBCS. Additional efforts are underway to integrate IBCS and C2BMC to support the BMD mission.

Patriot/Patriot Advanced Capability-3 (PAC-3): Patriot/PAC-3 is the Army's premier weapon system against air and tactical ballistic missile threats. With the DoD decision to end U.S. participation in the Medium Extended Air Defense System program at completion of the design and development phase, the Army continues to make improvement investments to the Patriot system to support the AMD strategy. The aim is to increase reliability, drive down operational and sustainment costs, and remain viable

well into the future. Seeing that about half of all Patriot units are currently deployed, operational tempo and stress remain high.

A number of significant Patriot/PAC-3 capability enhancements have been accomplished over the past year. Among the accomplishments were the completion of the Army's planned upgrades to all 15 PAC-3 fire units, fielding of the 15th Patriot battalion, and continued successful operational flight tests of the next generation PAC-3 missile, the Missile Segment Enhancement (MSE). During recent successful testing, both tactical ballistic missiles and air breathing threats were simultaneously engaged. The Army conducted a successful Milestone C defense acquisition board and remains on track for delivery of the MSE to the Warfighter by the fourth quarter of 2015. Additionally, the Patriot radar received a new digital processor. Coupled with recent software upgrades, the new digital processor increases performance of the radar against evolving threats while dramatically improving reliability, availability, and maintainability.

Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS): The JLENS system provides long-range, persistent, and elevated surveillance, detection, classification, identification, and fire control quality tracking of airborne objects such as cruise missiles, manned and unmanned aircraft, and large caliber rockets. The system has demonstrated the capability to track surface moving targets. In accordance with direction from OSD and the Joint Staff, the Army is scheduled to deploy the JLENS system to Aberdeen Proving Grounds, Maryland. With this deployment, the Army will initiate a three-year operational exercise of how surveillance aerostats improve missile defense sensor capabilities.

Terminal High Altitude Area Defense System: THAAD, a key component of the BMDS architecture, is designed to defend deployed and allied forces, population centers, and critical infrastructure against short- and medium-range ballistic missiles. THAAD is a high demand, low-density asset. A fully operational THAAD battery consists of 95 Soldiers, an AN/TPY-2 FBM radar, six launchers, a fire control and communications element, a battery support center, and a support element. THAAD has a unique capability to engage threats in both the endo- and exo-atmosphere using proven hit-to-kill lethality. There are now four activated THAAD batteries. Equipment

training and fielding has been completed for two of the batteries. In April 2013, one of these batteries conducted the first ever operational deployment of THAAD in response to the escalation of tensions in the Pacific region. The third THAAD battery is currently undergoing training and will be operationally available next year; the fourth battery is scheduled to become fully operational the following year. The addition of THAAD capabilities to the Army's air and missile defense portfolio brings an unprecedented level of protection against missile attacks to deployed U.S. forces, partners, and allies.

Conclusion

Mr. Chairman and Ranking Member Cooper, as a member of the Joint missile defense community, the Army will continue to pursue enhancements to the Nation's missile defense system. As a Service, the Army has lead responsibility for GMD, AN/TPY-2 FBM, Patriot, and THAAD. Our trained and ready Soldiers operating GMD elements in Colorado, Alaska, and California remain on point to defend the homeland against a limited intercontinental ballistic missile attack. As a force provider to the GCCs, our Soldiers ensure essential regional sensor capabilities and ballistic missile early warning. USSTRATCOM, through the JFCC IMD, continues to integrate BMDS capabilities to counter global ballistic missile threats and protect our Nation, deployed forces, partners, and allies.

While the operational, doctrine, and materiel development enhancements of the BMDS are essential, our most essential assets are the Soldiers, Sailors, Airmen, Marines, and Civilians who develop, deploy, and operate our missile defense system. I appreciate having the opportunity to address missile defense matters and look forward to addressing any of your questions.