Statement for the Record Mr. Frank Calvelli Principal Deputy Director National Reconnaissance Office

Subcommittee on Strategic Forces Committee on Armed Services U.S. House of Representatives March 15, 2016

Introduction

Chairman Rogers, Ranking Member Cooper, and distinguished Members of the Subcommittee, I am pleased to appear before you today on behalf of the National Reconnaissance Office (NRO) to speak on the subject of NRO's national security space activities. It is an honor for me to appear alongside our mission partners from the Department of Defense (DoD) and the Intelligence Community (IC). The NRO's close relationship and continuing collaboration with all our mission partners is vital to maintaining our nation's superiority in space.

The unclassified nature of today's hearing precludes me from discussing many details of NRO programs, as well as sharing some of our greatest successes. However, I welcome the opportunity to discuss NRO capabilities and the value of NRO contributions to national security in the closed session.

NRO's Critical Mission

Let me start where the Director of National Intelligence left off last month when he testified before the House Permanent Select Committee on Intelligence on the litany of challenges the United States' national security enterprise is facing today - a resurgent Russia increasingly assertive in Eastern Europe, Asia, and the Middle East; a China that continues advancing its military capabilities while aggressively pursuing territorial claims in the Pacific; a North Korea that recently boasted of its successful testing of a nuclear device; an Iranian regime that continues to sponsor terrorist groups around the world, including Hamas and Lebanese Hizballah; and the spread of ISIL, which he referred to as the "pre-eminent global terrorist threat." Critical to addressing these challenges and to countering the resultant threats are robust intelligence,

reconnaissance, and surveillance (ISR) systems that provide decision makers the information they need to prevent or respond to crises. This is where the NRO has proven vital.

Overhead reconnaissance developed, acquired, launched, and operated by the NRO enables the United States (U.S.) and its Allies to maintain strategic, operational, and tactical superiority across a broad spectrum of missions around the globe. It is the foundation of U.S. global situational awareness, providing unique, timely access to locations around the world. NRO systems assist national policy formulation in addition to intelligence, military, and homeland security operations, without risk of putting U.S. military personnel in harm's way. The NRO's increasingly diverse sensor systems provide its customers with unprecedented flexibility and enables intelligence integration, assessment, and problem solving across geographic boundaries and intelligence domains. And it can bring these capabilities to bear on a particular problem at the speed of tasking. These capabilities contribute directly to our nation's ability to achieve diplomatic goals, deter aggression and proliferation of weapons of mass destruction, combat terrorism, and conduct security operations worldwide.

This year marks the 25th anniversary of Operation Desert Storm; since that conflict the NRO has become a key global military operations enabler and many of NRO's capabilities are integral to U.S. and Allied efforts in Afghanistan and other theaters. In addition to traditional NRO ISR systems and support, we provide a wide array of focused capabilities to help solve specific, critical ISR needs for deployed personnel around the world. We've brought dozens of innovative ISR solutions to the fight. These services, products, and tools directly contribute to the highest priority missions, to include:

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countering Improvised Explosive Devices; identifying and tracking High-Value Targets; and improving battlespace awareness. NRO Director Betty Sapp recently visited Afghanistan and was humbled to hear how deployed NRO personnel and capabilities are directly impacting the fight in Afghanistan, helping to enable combat operations, and saving U.S. and Coalition lives.

One of the most important capabilities we provide to any fight is our people - our on-site problem solvers. In concert with our mission partners, we provide direct support to the Combatant Commands, their Service and Functional Components, and deployed tactical units. We provide a wide array of capabilities, products, and services to include education, training, exercise support, and subject matter expertise on NRO systems, capabilities, data, and derived intelligence products. We also conduct operational coordination, assist with collection strategies, and provide innovative technical solutions to challenging intelligence, surveillance, and reconnaissance needs. To do this, our Field Representatives, military and civilian NRO subject matter experts assigned to these units, reach back to the NRO, leveraging the breadth and depth of expertise that the NRO enterprise possesses.

NRO Field Representatives have access to the full suite of NRO capabilities, including the Fusion Analysis and Development Effort (FADE). FADE develops customized tools and multiintelligence analytic methodologies which allow our warfighters to visualize large volumes of data temporally and spatially, establishing patterns of life, and identifying the unusual when it happens, enhancing the ability to find, fix, and finish targets. For example, FADE personnel embedded with the Joint Improvised-Threat Defeat Agency helped identify an explosive

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factory in Iraq; leveraging this support, the factory was targeted resulting in multiple militants killed and a substantial amount of weaponry removed from the battlefield.

Another capability having a major impact on operations is Airborne Overhead Cooperative Operations (AOCO). AOCO helps bridge National and Tactical collection platforms to provide the warfighter with near real-time, enhanced geolocations on highpriority tactical missions. In 2015, AOCO improved geolocation accuracy by 75 percent over single sensors, and reduced specific mission planning analysis times by 90 percent.

Finally, the NRO's Joint Collaboration Enterprise and the Integrated Joint Collaboration Cells at Westfields, Aerospace Data Facility East, Aerospace Data Facility Southwest, and the Mission Situational Awareness Cell at Aerospace Data Facility Colorado enable direct support to our warfighters. These collaboration nodes provide warfighters and customers around the globe with real-time access to overhead service and 24/7 expertise to maximize the application and utility of NRO capabilities.

Unfortunately this setting does not allow me to share the NRO's greatest successes, but I am proud to share just a small part of what we bring to the fight.

NRO's Acquisition Excellence

In order to keep pace with changing target and threats, the NRO continues to incorporate new technologies and deliver a more capable, integrated, resilient, and affordable architecture. We are able to do this by leveraging our unique blend of engineering skills, a vigorous research and development program, ground station operational excellence, and specialized sensor data processing capabilities. We are committed to smart

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acquisition investments and practices to ensure continued global coverage and availability of our vital national security systems and we work tirelessly to continue to deliver these systems on time and within budget.

NRO manages the majority of the IC's major systems acquisitions (MSA). Currently 17 of our 18 MSAs are "green" in terms of acquisition performance, meeting or exceeding 25 of 27 (93%) cost and schedule performance metrics. The NRO also continued its record of success in financial management. For the seventh year in a row, the NRO received a clean audit opinion on our financial statements - a truly unprecedented accomplishment within the IC. I am equally pleased to report that the auditor's independent review also resulted in the downgrade of a longstanding material weakness over our Property Plant and Equipment cost accumulation environment, one we have had since 2003, and the remediation of a material weakness related to NRO accounting policies, guidance, and methodologies. The NRO has no remaining material weaknesses over financial reporting.

As perhaps a more visible testament to NRO's excellence in resource management, this past October the NRO successfully delivered and launched a new satellite into orbit, as well as an auxiliary payload that carried 13 CubeSats to space. The NRO sponsored nine of the CubeSats while the National Aeronautics and Space Administration (NASA) sponsored the remaining four. The missions of these CubeSats included user software-defined radios to provide beyond-line-of-sight communication for disadvantaged users in remote locations, and technology pathfinders to demonstrate tracking technologies, optical communications, and laser communication. Last month, we launched the first of four satellites planned for 2016 - a busy year for our Office of Space Launch and others. Each of these launches is

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a visible testament to the diligent efforts of our program teams who successfully acquire and deliver these complex systems; each signifies enhanced intelligence capabilities for the warfighter and improved decision advantage for our analysts and policymakers.

The NRO also remains a committed launch customer; our highest priority remains our assured access to space through reliable providers with predictable costs. We partner closely with the Air Force and continue to rely on Air Force-certified launch providers to successfully put our critical national security payloads in orbit. We are committed to working with the Air Force, NASA, and commercial space providers to ensure our nation's launch and space industrial base can meet our mission requirements. As we transition to new and upgraded domestic launch vehicles, we remain concerned that restrictions to the availability of the launch vehicles we currently rely on to deliver our payloads could significantly increase costs and slip schedules.

NRO Strategic Thrusts

Director Clapper noted in his Congressional testimony last month that "unpredictable stability has become the 'new normal' and this trend will continue for the foreseeable future," which means the NRO's capabilities need to keep getting better and faster. In order to do this and stay ahead of our adversaries, we are focused on delivering (1) increased performance in space, (2) increased capability on the ground, and (3) improved architectural resiliency and protection in order to continue to meet the challenges of our dynamic operations environment and address the nation's highest priority problems.

We are improving the persistence of our space-based systems, providing greater "time on target" to observe and characterize activities, and the potential relationship between activities, and to hold even small, mobile targets at risk. We are increasing the capabilities and sensitivities of our systems by incorporating new technologies in space, and on the ground. New technology, enabled by Research and Development (R&D), is absolutely essential here and our superb R&D team collaborates with American entrepreneurs to find ways to do from space, what others think impossible to do anywhere.

We are building ground systems today that allow capabilities that could not have been imagined just a few years ago. Sentient - a "thinking" system that allows automated, multi-intelligence tipping and cueing at machine speeds - is just one of those capabilities. Further, our Future Ground Architecture will transform our ground architecture into an integrated enterprise which empowers users of all types with the capabilities to receive, process, and generate tailored, timely, highly-assured, and actionable intelligence.

We are enhancing our ability to provide all decision makers, from senior policy makers to deployed warfighters, the ability to visualize intelligence information both temporally and spatially, making the connections more apparent. And we are investing substantial dollars in the resiliency of our ground and space-based systems to ensure we continue to deliver our mission, regardless of the threat environment.

The NRO fully recognizes that space is an increasingly contested and congested environment. Foreign nations understand the incredible decision advantage our capabilities in space provide, which is why they are actively pursuing the means to deny our space advantage. For that reason, the NRO is committed

to making its entire mission architecture more resilient; to include developing collection systems with enhanced survivability built-in from the beginning. In short, we are more focused on survivability and resiliency from an enterprise perspective than we have ever been and we have made significant investments to that end. Those investments have been informed by detailed modeling and analysis, and driven by strategy. We have worked this strategy collaboratively with the DoD, the IC, and the broader space community, through various means to include the Joint Interagency Combined Space Operations Center (JICSpOC). One of the JICSpOC's major benefits is that it provides DoD and the IC a robust test and experimentation environment to better integrate our space operations in response to threats; those we face today and those we will face tomorrow. Even though it is fairly new, the JICSpOC is already demonstrating the power of unity of effort and information in space operations.

NRO Workforce

Spanning more than five decades, the men and women of NRO have been and are the keys to NRO's success. That's why the Workforce Stability Initiative (WSI) we began in 2014 is so important. Thanks to the support of the Congress and our mission partners, we stabilized the Central Intelligence Agency (CIA) element of our engineering workforce through the Office of Space Reconnaissance. Then in October we officially established the NRO's first dedicated workforce, NRO's DoD cadre, after developing and implementing new NRO policies, establishing NRO as a parent organization, transferring personnel in the DoD support systems, and establishing funding mechanisms for payroll. These two elements represent about one-third of our

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government workforce and will provide us with enhanced stability across core NRO functions. We will also continue to leverage rotational personnel from the CIA and DoD for their broad-based experience and innovation. By establishing a core NRO workforce and also leveraging rotational workforce capabilities, the NRO will continue to have the people necessary to provide the nation with the premier space reconnaissance capabilities for national security.

Conclusion

The men and women of the NRO embody our core values of Personal Integrity and Accountability, Teamwork Built on Respect and Diversity, and Mission Excellence. It is our highly-skilled personnel who go above and beyond to execute our mission to provide "Innovative Overhead Intelligence Systems for National Security." Driven by our extraordinary people, the NRO will continue on the path of delivering acquisition and operations excellence, as well as the unparalleled innovation that is the hallmark of our history and the foundation of our future. We encourage you to continue visits to the NRO, our mission ground stations, and satellite factories to meet our talented workforce and for detailed discussions on how our systems directly support the national security of the United States.

Mr. Chairman and members of the Subcommittee, thank you for your continued support of the National Reconnaissance Office and the opportunity to appear before you today.