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Hearing on “Fiscal Year 2022 Space Priorities and Posture”**

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60 YEARS | ABOVE AND BEYOND

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Good afternoon Chairman Cooper, Ranking Member Turner, and members of the Subcommittee. It is a great honor to represent the people of the National Reconnaissance Office (NRO). Our mission is to develop, acquire, launch and operate the nation's reconnaissance satellites; we are a member of both the Intelligence Community (IC) and Department of Defense (DoD).

Mr. Chairman, before I address the NRO's capabilities and priorities, please allow me to briefly reflect on our past year. Like other agencies across the government, the COVID-19 pandemic presented challenges for us. Despite that, it was also a year of opportunity and achievement, and I would like to share just a few of these with members of the Subcommittee.

Meeting Mission, Overcoming Challenges

Due to the incredible efforts of our people and partners, I am pleased to report to the Committee that NRO's systems have maintained 100 percent of their capabilities throughout the COVID-19 pandemic. We ensured our customers received the intelligence they needed while protecting our workforce and their families by instituting health and safety protocols. During this period, the NRO experienced one of the most successful years in recent memory with six launches and twelve payloads delivered to orbit, many with first-ever capabilities. The launches included our first dedicated launch with Rocket Lab from New Zealand and our first dedicated launch from the NASA Wallops Flight Facility in Virginia. On the business side, our outstanding fiscal processes have earned us a reputation for financial management excellence. In 2020, the NRO achieved our 12th consecutive clean financial audit — a feat unrivaled in the IC. Also, last year, we inaugurated our NRO cadre internship program and continued our progress in the execution of our cadre workforce strategy to establish a reliable talent pipeline for the future. During these challenging times, the people of the NRO have been adaptable and have overcome numerous obstacles to meet commitments.

Sixty Years Above and Beyond

Turning to today, the NRO is bridging the innovative legacies of our past with a cutting-edge vision for our future during the NRO's 60th Anniversary celebration. Since 1961, the NRO has taken quantum leaps each decade in the evolution of our overhead reconnaissance space and ground systems to provide the timely, relevant, responsive global situational awareness that national security decision-makers and the military depend on for success in their missions.

The systems we build and operate collect geospatial intelligence (GEOINT) and signals intelligence (SIGINT) — enabling discovery, monitoring, and tracking of activities for a range of defense, intelligence, and civil applications, including:

- Maintaining global situational awareness
- Monitoring the proliferation of weapons of mass destruction

- Tracking international terrorists, drug traffickers, and other criminal organizations
- Developing highly accurate military targeting data and battle damage assessments
- Understanding the capabilities of competitors
- Supporting international peacekeeping, humanitarian relief operations, and natural disaster response and mitigation.

Our products and services are in high demand and support a wide range of national security requirements from the strategic to the tactical. The GEOINT and SIGINT information collected from our sensors deliver insights about activities in hard-to-reach areas, and our collaborative work with DoD and IC mission partners at NRO's ground stations are used for many purposes, including indications and warning.

NRO supports civilian agencies across the U.S. Government in support of their efforts to understand climate change, assess crop production, map endangered species habitats, study wetlands, and track damage from hurricanes, earthquakes, wildfires, floods, and other natural disasters.

Close relationships with the National Geospatial Intelligence Agency (NGA) and the National Security Agency (NSA), who task our satellites, provide the foundational pieces of the vital GEOINT and SIGINT that underpins the full-spectrum all-source analysis done at the Central Intelligence Agency, Defense Intelligence Agency, Department of State's Bureau of Intelligence and Research, and at the Combatant Commands. Since the stand-up of U.S. Space Force (USSF) and U.S. Space Command (USSPACECOM), we've forged strong relationships to mutually coordinate activities to assure that the space-based systems the U.S. and our allies rely on can operate without disruption in an increasingly contested and congested space domain.

The NRO is able to maintain U.S. space surveillance leadership because our organizational business model is flat, which encourages agility and innovation. The agency's end-to-end functional responsibilities allow us to develop what is needed from requirements through design and build to operations.

Focus on the Future

While the U.S. continues to lead the way in space-based surveillance, there has been growth in the number of competitors in the space domain. Adversaries are increasingly becoming aggressive and capable as they attempt to challenge the U.S. in space. Further, the COVID-19 pandemic has caused us to take a harder look at our supply chain to assess how global events, security vulnerabilities, and production limitations can impact the technologies and products we need for our systems. To meet the tough challenges of today and the future, we are expanding our commercial partnerships, strengthening our government and international partnerships, adapting processes to

innovate faster, baking in resilience from our assets on the ground to our systems on orbit, and recruiting and retaining a highly skilled, diverse workforce.

Leveraging the Commercial Marketplace

The NRO is taking a *whole of commercial approach* to address some of our mission areas and deliver additional capabilities for our customers. In areas such as commercial imagery, commercial launch services, and Cloud computing services, the growth and maturation of commercial space industry capabilities are allowing the NRO to securely and efficiently supplement or replace government systems. Commercial satellite capabilities are critical to future national security space architectures — and commercial constellations already provide actionable, timely, and shareable data to military units who were underserved in the past.

Leveraging the commercial marketplace allows the NRO to buy and adapt for our own purposes a new range of capabilities that expand our supplier base, lower costs, shorten timelines, and increase flexibility. In the not-too-distant future, the NRO envisions a proliferated and diversified overhead architecture comprised of national and commercial satellites, large and small constellations, electro optical and other phenomenologies. This hybrid model will provide greater capacity, capability and responsiveness.

Encouraging Faster Innovation

We continually create new capabilities by developing and employing new technologies, often with new partners. Through the Director's Innovation Initiative, our Directorate of Advanced Systems and Technology has created a risk-tolerant environment for non-traditional partners to bring forward proposals for disruptive and high-payoff concepts that could support NRO missions. We are expanding the number of academic institutions we work with to develop future capabilities and materials, and to create a pipeline of diverse, skilled, cleared talent for a sustainable future workforce.

Innovation on the ground includes unlocking the power of data-centric systems for faster, more efficient data access and curation. Additionally, the use of artificial intelligence and machine learning brings us real-time, shared overhead data awareness at faster speeds and provides automated tipping and queueing capabilities to support timely multi-INT anticipatory intelligence.

Building Resilience into Everything We Do

From our spacecraft design to our information technology infrastructure to our collection architecture, NRO teams take a cross-enterprise approach to ensuring mission resilience. We collaborated closely with industry, academic, and mission partners to design an overhead architecture that leverages small to large satellites and best-in-class government and commercial solutions to deliver a resilient, proliferated, and persistent constellation that can anticipate and adapt to current needs, emerging and future customer demands, and adversary threats.

The National Space Policy directed the Secretary of Defense and the Director of National Intelligence to protect and defend U.S. national security space assets through integration and synchronization of operational command and control capabilities and activities that foster seamless execution between the IC and DoD. Key relationships in this effort are among USSPACECOM, USSF and NRO. I am pleased to report that these ties continue to strengthen as we work together to protect and defend our assets. The NRO and the space community are coordinating and collaborating like never before.

Our People Make the Difference

I cannot mention enough the NRO's most important asset: Our people. The NRO is only successful because of the outstanding dedication of our workforce. Building and operating the NRO's advanced reconnaissance systems requires the talents of a team of engineers, scientists, financial managers, acquisitions professionals, space operators, and many other career fields. Making sure that we have the talent to compete and meet future mission demands is the driving force of the NRO's workforce strategy. As we mature the NRO cadre, which stood up just a few short years ago, we are invested in growing a highly skilled, diverse, and thriving workforce.

When the NRO was established in 1961, our challenge was best expressed by a Founder of the NRO, Edwin Land, who said our task is to: "*See it all, see it well, and see it now.*" Our people make all the difference and they are the reason we at the NRO can make the seemingly impossible — possible. It is the people of the NRO that will lead us to a future where we can, as we like to say with a nod to Edwin Land: "*Observe it all, observe it well, observe it now, and innovate faster.*"

Conclusion

Chairman Cooper, Ranking Member Turner, and members of the Subcommittee, thank you for the opportunity to share with you the unique value and capabilities the NRO brings to our military, intelligence analysts, and national decision-makers. I look forward to the Subcommittee's questions.