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COMMITTEE STRATEGIC FORCES
SUBCOMMITTEE

STATEMENT
OF
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BEFORE THE
SUBCOMMITTEE ON STRATEGIC FORCES
OF THE
HOUSE ARMED SERVICES COMMITTEE
ON
NUCLEAR FORCES & ATOMIC ENERGY
DEFENSE ACTIVITIES
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INTRODUCTION

Thank you Chairman DesJarlais, Ranking Member Moulton, and members of the House Armed Services Subcommittee for Strategic Forces. I am honored to appear before you as a representative of the Department of the Air Force's (DAF) Nuclear Enterprise. Our mission, to maintain a safe, secure, and effective nuclear deterrent, is as vital today as it was at the dawn of the nuclear age. Along with my teammates across the Department of Defense, the Airmen and Guardians of the DAF work tirelessly to ensure the United States retains the nuclear deterrent our nation demands. Their unwavering professionalism ensures the foundation of our national security remains strong, and we must continue to provide them the right tools and capabilities to face emerging threats. I would like to thank Congress for its sustained support to ensure that the U.S. nuclear enterprise has the resources to meet all current and future challenges.

The United States, our allies, and partners confront an evolving strategic environment. China is rapidly expanding its nuclear and conventional forces as part of a broader project to reshape the Indo-Pacific and to challenge U.S. interests. Russia continues to modernize and diversify its nuclear arsenal, further complicating deterrence. North Korea and Iran add additional complexity. This is not a return to the Cold War. Instead, the emergence of multiple nuclear threats represents a new and fundamentally different strategic environment that no nation has before witnessed. Moreover, the pace and reach of disruptive technologies and evolving strategic threats to the U.S. homeland and forces abroad compound these challenges, increasing the prospect for rapid, unpredictable, and dramatic changes to the strategic environment.

In the emerging security environment, sustaining credible nuclear deterrence remains a DAF top priority mission. An effective, reliable, and credible U.S. nuclear deterrent underpins our national defense, in turn protecting the security of the American people. To do so, the Department of Defense and the DAF are undertaking a full-scope recapitalization of current systems and supporting infrastructure to deliver modern and credible deterrence capabilities. While great progress has been made, it remains vital this effort continues to be fully supported to prevent any degradation to the DAF's contribution to our nation's nuclear assurance and deterrence capabilities. Deferments and delays force our Airmen to maintain and operate systems that are decades past their planned lifespans and were developed for a strategic environment vastly different than the needs of today's national defense. The choice is no longer between maintaining the existing platforms or replacing them. It is now a matter of replacing them promptly, while maintaining legacy systems, or facing operational shortfalls.

In the midst of the DAF's comprehensive nuclear modernization effort, the Air Staff's Strategic Deterrence and Nuclear Integration Directorate closely aligns with the Secretary of Defense's top three priorities: Revive the Warrior Ethos, Rebuild Our Military, and Reestablish Deterrence. Maintaining the U.S. nuclear deterrent requires discipline, professionalism, excellence, and a strong warrior spirit. Our back-to-basics approach prioritizes these qualities inherent to the nuclear mission, while also ensuring timely and robust nuclear force development, modernization, and resourcing to build a more resilient and lethal U.S. military force. Our team of dedicated military and civilian members ensure the DAF has the necessary capabilities to protect the United States of America. Finally, deterrence is our primary objective. We continue to provide the guidance, oversight, and advocacy for the DAF strategic deterrence mission. We take pride in working toward Secretary Hegseth's priority of reestablishing deterrence in an uncertain and dangerous world.

THE THREAT

The increasing conventional and nuclear threats to the United States and our allies and partners reinforce a sense of urgency shared across the DAF. We now face multiple nuclear-armed challengers, generating new complexities within the global strategic environment.

China is the pacing threat for U.S. defense and has embarked on an ambitious expansion, modernization, and diversification of its nuclear forces. Since I last spoke to this committee one year ago, China has increased its stockpile by over 100 additional nuclear weapons, bringing their total arsenal to more than 600 weapons today. China is on pace to have more than 1,000 operational nuclear warheads by 2030, comprised of systems ranging from theater missiles with lower yields to Intercontinental Ballistic Missiles (ICBMs) with very high yields to provide options at every rung of the escalation ladder. Combined with a move to Launch On Warning/early warning counterstrike, and despite China's stated No First Use Policy, the range of nuclear options available will provide Chinese Communist Party and military leaders with new means to leverage nuclear weapons for coercive purposes.

China has a nuclear Triad consisting of bombers, submarines, and land-based missiles. The 2024 China Military Power Report to Congress and the unclassified 2024 Nuclear Challenges Report by the Defense Intelligence Agency noted China has approximately 400 ICBMs in its arsenal, all of which can reach the U.S. homeland. China has recently constructed three ICBM silo fields and begun to load them with solid-propellent ICBMs—a significant change from its history of having only liquid-fueled ICBMs. Further, China maintains road-mobile ICBMs, including modernized capabilities, which have improved range and accuracy, and can be armed with up to three warheads per missile. China's Intermediate-Range Ballistic Missile (IRBM) complements ICBMs, enabling strikes against targets in the Indo-Pacific. China's IRBM is its first nuclear-capable missile system capable of precision strikes and is the most likely weapon system to field a lower-yield warhead in the near-term. Finally, China is reportedly developing advanced nuclear delivery systems, such as Hypersonic Glide Vehicles (HGV) and a Fractional Orbital Bombardment System (FOBS). China has deployed an experimental IRBM that likely has an HGV payload option as well as conventional land-attack, conventional anti-ship, and nuclear capabilities. On July 27, 2021, China tested an ICBM-range HGV traveling about 25,000 miles, demonstrating the ability to field a FOBS, further complicating U.S. homeland defense measures.

Russia maintains the largest and most diverse nuclear weapons stockpile and is actively expanding and modernizing its nuclear capabilities, as well as using increased nuclear rhetoric surrounding the war in Ukraine. Russia is nearing the completion of its current strategic nuclear force modernization effort; as of February 2024, Russia claimed to have upgraded 95% of its nuclear forces. Russia is also modernizing its stockpile of approximately 2,000 non-strategic nuclear weapons, which are not limited by the New START Treaty. This stockpile includes anti-ship missiles, Short-Range Ballistic Missiles (SRBM), gravity bombs, depth charges, anti-submarine and anti-aircraft missiles, torpedoes, and antiballistic missile systems, along with so-called novel nuclear capabilities—such as the nuclear-powered, nuclear-armed autonomous underwater vehicle and nuclear-powered, nuclear-armed cruise missile. In February 2023, Russia unlawfully purported to suspend its participation in the New START Treaty, the last remaining bilateral nuclear arms control agreement between the United States and Russia. As of January 2025, the United States is unable to confirm that Russia is abiding by all of the Treaty's limits.

North Korea continues to pursue destabilizing capabilities and technologies through routine ballistic missile flight tests and training launches. At the same time, North Korea is expanding their quantity and types of nuclear-capable delivery systems, which threaten regional stability. North Korean strategic forces include SRBMs, medium-range ballistic missiles, IRBMs, and ICBMs, along with claimed HGV capabilities. North Korean high-level statements threatening nuclear employment suggest potential nuclear use at any stage of a crisis or conflict. Kim Jong Un remains committed to increasing North Korea's nuclear warhead stockpile and improving his country's ballistic missile capabilities to threaten the United States and its allies. In 2024 alone, North Korea launched three IRBMs purported to carry maneuverable, hypersonic payloads. Kim has also emphasized the development of tactical nuclear weapons, as well as the overarching goals of "smaller and lighter" and "ultra-large" nuclear warheads.

Iran remains a serious nuclear proliferation concern due to its expanding nuclear program and its destabilizing actions in the region, including support for violent non-state actors and aggression against U.S. allies and partners. The International Atomic Energy Agency reported in February 2025 that Iran has significantly increased production and accumulation of high enriched uranium. Iran also maintains the largest missile force in the Middle East and continues to develop ballistic missiles to increase accuracy and lethality, as well as space-launch vehicles that could be capable of ICBM ranges if configured for that purpose.

Lastly, observed strategic alignment and partnerships between these four countries create dangerous synergy as an emerging anti-western coalition. The introduction of North Korean forces in the war in Ukraine is only one example of this emerging alignment. As a result, the United States now confronts the potential for simultaneous conflicts with two or more nuclear-armed powers. The DAF cannot face these threats alone, and we will increasingly look for ways that we can collaborate with our partners and allies to share the security burden of maintaining our mutual security interests.

STRATEGY & THE NUCLEAR TRIAD

U.S. strategy has consistently outlined three roles for nuclear weapons: deter strategic attack, assure allies and partners, and achieve objectives if deterrence fails. With nuclear threats advancing at a rapid pace, U.S. nuclear forces and their enabling infrastructure are more important today than ever before. The DAF remains committed to providing a safe, secure, and effective nuclear deterrent as part of a broader effort to revive our warrior ethos, rebuild our military, and reestablish deterrence. The strategic nuclear Triad, consisting of land-based ICBMs, strategic bombers, and submarine-launched ballistic missiles equipped with a strategic weapon system has served as a cornerstone of U.S. defense strategy for decades. Each element of U.S. nuclear forces provides unique and complementary attributes. These capabilities are enabled by the nuclear command, control, and communications (NC3) architecture, which ensures critical communication and decisions are sent and received. When brought together, the Triad offers the President flexibility and resilience to sustain credible assurance and deterrence.

REQUIREMENTS, MODERNIZATION, AND RECAPITALIZATION

Strategic deterrence is a no-fail mission. Decades of deferring modernization of Cold War-era systems make it imperative to modernize U.S. nuclear forces to ensure a credible strategic deterrent. While credible today, legacy systems are quickly reaching the end of their lifespan. The DAF's nuclear modernization programs of record – including the B-21 Raider bomber, the Sentinel ICBM,

the Long-Range Stand Off Weapon (LRSO), the B-52 bomber, and the construction of advanced Weapons Generation Facilities—will recapitalize current systems and supporting infrastructure to deliver modern and credible deterrence capabilities by providing next generation nuclear delivery systems. We are also adapting our NC3 architecture and capabilities to increase resilience and responsiveness. This is a once in a generation effort that has not occurred on this scale since the 1980s. Even as the DAF modernizes, we must simultaneously sustain current systems to maintain the strategic deterrence mission.

The DAF continues to maintain a strong, mutually supportive partnership with the Department of Energy's National Nuclear Security Administration (NNSA) to ensure our modernization and recapitalization programs are completed as efficiently as possible while meeting stringent military requirements. We are revitalizing an atrophied industrial base, providing the foundation for future nuclear deterrence capabilities. While these programs have encountered challenges greater than initially anticipated, the DAF, with our NNSA and industry partners, will continue to work to bring them to a successful conclusion.

It is critical that the DAF's nuclear modernization programs deliver upgraded systems without incurring capability gaps, now and into the next decade. Multiple Presidential Administrations have supported recapitalization U.S. nuclear forces, while continuing critical sustainment efforts for our current nuclear forces and support components. I urge Congress to continue its bipartisan support for the sustainment of our existing and future critical national security capabilities and associated infrastructure.

LAND LEG - INTERCONTINENTAL BALLISTIC MISSILES

The ICBM force remains an indispensable element of the U.S. nuclear deterrent that has been on-alert 24 hours a day for 365 days a year since the 1960s. Our ICBMs are the most responsive leg of the triad. Once a confirmed and authenticated order from the President is received, the ICBM is ready to launch immediately, providing options to rapidly respond to any emerging threat. Through the combination of accuracy and rapid response, an adversary must consider our ICBM force in any decision involving their use of nuclear weapons. Moreover, the land-leg of the triad is highly survivable against anything but a large-scale nuclear attack. The quantity and dispersion of the ICBM force make it a nearly insurmountable targeting problem for our adversaries. Finally, ICBMs provide the capability to upload additional nuclear warheads in response to evolving threats and are rapidly re-targetable, enabling the necessary flexibility and adaptability in executing against multiple adversaries armed with diverse systems. Owing to these attributes, ICBMs deter strategic attacks on the homeland by greatly complicating the decision-making calculus of any potential adversary.

The Minuteman III weapon system currently provides the ground-leg component to U.S. nuclear force. The initial Minuteman capability was fielded in 1961 (or 1962) and the current Minuteman III missile was fielded in 1970, with an original design life of 10 years. The system has been extended to what now its 55th year of fielded service. To maintain viability until it is replaced, the DAF is funding ICBM acquisition and sustainment programs to address the most pressing issues to mitigate obsolescence challenges. Efforts include ground electrical, ground mechanical, air vehicle, communication, cryptographic, system testers, transportation, and handling equipment modernizations. The DAF continues to work across multiple lines of effort to ensure the Minuteman III force remains safe, secure, effective and fully serviceable and viable until fully replaced by Sentinel.

The Sentinel program represents the future of land-based nuclear deterrence, providing the next generation ICBM. It will bring enhanced safety, security, and reliability features by replacing both the aged missile and much of the supporting infrastructure. In January 2024, the Air Force formally notified Congress and DoD of a critical Nunn-McCurdy breach of the Sentinel program. After a robust review of the program and a root cause analysis, the Department of Defense reported to Congress following a comprehensive review in July 2024, in accordance with the Nunn-McCurdy statute, that the Sentinel program is essential to U.S. national security and that no alternative can provide acceptable capability to meet the joint military requirement at less cost. The Sentinel program has successfully tested stages 1, 2, and 3 of the missile, including a March 2025 full-scale qualification static fire test for the Sentinel stage 1 solid rocket motor. The DAF is progressing toward a restructured program, to include revalidated requirements and a modified acquisition strategy, which is expected this fall. There is an on-going Nuclear Command, Control, and Communications (NC3) study assessing the ICBM secondary launch capability from the E-6B Mercury Take Charge and Move Out platform. I am confident in the way-ahead with that effort. The DAF will continue to work with industry partners to manage technical tradespace, drive down cost and schedule risk, and optimize weapon system design to meet acquisition objectives. Due to the strategic importance of the land-based leg of the nuclear Triad, continued, consistent, and predictable funding remains essential to ensure the delivery of the Sentinel weapon system.

AIR LEG – BOMBERS AND ASSOCIATED NUCLEAR WEAPONS

Strategic bombers provide the most flexible leg of the Triad. The United States can deploy aircraft armed with cruise missiles, bombs, or a mix of both to signal U.S. intent and resolve during a crisis, as well as enhance operational effectiveness. The high visibility of strategic bombers, along with tankers and command-and-control aircraft, provide tangible assurance and deterrence activities. When called upon, it provides a recallable and tailorable force that can employ the full range of combat power across the conventional and nuclear spectrums of conflict, giving Combatant Commanders the flexibility and reach to strike, should deterrence fail.

The air leg modernization efforts comprise three elements: air-launched cruise missiles, strategic bombers, and dual-capable aircraft. Investments in the B-21 and LRSO programs, along with modernization efforts for the B-52, ensure the United States will maintain the capability to project combat power across the full spectrum of conflict.

The AGM-86 Air-launched Cruise Missile (ALCM) was fielded in 1982, also with a 10-year initial design life, and is now operating in its 43rd year. The growth and expansion of advanced integrated air defense systems necessitates a modern capability. LRSO will replace ALCM, providing improved survivability and standoff range to complicate an adversary's defense calculus. The LRSO program represents the first simultaneous integrated nuclear program, bringing together delivery system and warhead, that DoD and NNSA have executed since the 1980s. I am pleased to report that the LRSO program remains on track to meet its planned fielding date.

The planned two-bomber fleet of modernized B-52s and B-21 Raiders, will ensure the ability to reach any target, anytime, anywhere in the world with overwhelming force. The modernized B-52J will include new engines, flight systems, radar, and communications, enabling a more reliable, modern, and integrated platform through 2050+. The B-52J's F130 engine passed its Critical Design Review in late 2024. The B-52's Radar Modernization Program test modification began in May 2023 with initial capability expected in FY30. The Air Force will sustain and upgrade legacy

strategic bombers to meet national and warfighter requirements until they are retired in the mid-2030s. The sixth generation B-21 Raider will provide the backbone of our military's flexible strike capability, possessing the range, payload, and advanced technology to penetrate heavily defended airspace and accomplish its mission. Today, the B-21 is well into its flight test campaign and progressing successfully as it enters low-rate initial production, with a plan to field a fleet of at least 100 B-21 bombers.

In addition, the nuclear-certified F-35A, coupled with modern B61-12 nuclear gravity bombs, significantly modernizes NATO's deterrent capability. This combination provides a crucial, advanced element within the alliance's overall defense posture.

INFRASTRUCTURE & WEAPONS GENERATION FACILITIES

The modernization of our bomber and ICBM arsenals necessitates a parallel effort to update the supporting infrastructure. Many of these facilities, which date back to the Cold War, are facing significant sustainment challenges. This aging infrastructure directly hinders the ability of our Airmen to efficiently carry out the DAF's critical nuclear mission. A key solution is the recapitalization of outdated Weapon Storage Areas into modern Weapons Generation Facilities (WGFs). WGFs offer a consolidated, secure environment for weapon maintenance, storage, and training, streamlining support for both ICBM and bomber operations. This modernization will enhance the rapid generation of our nuclear forces and improve the efficiency of routine maintenance for both ground-based and air-based elements of the Triad. Ultimately, WGFs represent a vital investment in the safety, security, surety, and effectiveness of our nuclear capabilities. Though they may not garner the same attention as other assets, these facilities are the essential backbone of the DAF's ability to project credible deterrence and provide unwavering assurance to our nation and allies.

The DAF has made significant progress in modernizing its nuclear weapons support facilities. The first WGF at F.E. Warren Air Force Base (AFB) is nearly complete and will be ready for occupancy later this year. It will achieve Initial Operational Capability (IOC) status next year. The lessons learned at F.E. Warren are driving improvements and efficiencies in the construction of the Malmstrom AFB WGF, which remains on schedule for IOC before the end of the decade. At Barksdale AFB, the first bomber-focused WGF is ahead of schedule, with Phase II construction progressing rapidly towards an IOC in 2028. Furthermore, construction of the first B-21-focused WGF at Ellsworth AFB is also ahead of schedule, also targeting IOC before the decade is out. Minot AFB, supporting both ICBM and B-52 missions, presents unique complexities. The DAF continues to assess the requirements for this strategically important location to ensure the most effective modernization approach.

NUCLEAR COMMAND, CONTROL, AND COMMUNICATIONS

Underpinning the ability to deter, assure, and achieve U.S. objectives should deterrence fail is robust NC3. For credible nuclear deterrence, the President and senior leaders must be able to detect nuclear threats, make decisions, and direct nuclear forces. Our NC3 network consists of over 250 systems, of which the DAF manages approximately seventy-five percent. The DAF remains dedicated to providing reliable and resilient NC3 capabilities across a wide radio frequency spectrum, ranging from missile warning to force direction.

The DAF is committed to modernizing and safeguarding these interconnected elements against

emerging threats in cyber and space domains. In FY25, the DAF plans to continue investing in NC3 and missile warning programs, to include Air Force systems and networks and Space Force networks and missile warnings. We are actively replacing aging systems with solutions, for example, the Strategic Automated Command and Control System is modernizing from a twisted-pair copper-cable technology to Internet Protocol solutions, and the Single Channel Anti-Jam Man Portable SATCOM terminal used in our Command Centers and Command Posts is in the process of being replaced with Global Aircrew Strategic Network Terminal enabling us to transition from the 1980's MILSTAR satellites to Advance Extremely High Frequency (AEHF) satellites. In addition, the Family of Beyond Line-of-Sight-Terminal Force Element Terminal will provide the B-52 with AEHF capabilities. Moreover, we ensure seamless integration with the Space Force's satellite programs, including the Space-Based Infrared System, Next Generation Overhead Persistent Infrared, and Evolved Strategic Satellite Communications, which provide critical missile warning capabilities.

The DAF is continuing investment in the Survivable Airborne Operations Center (SAOC) as a replacement for the aging E-4B National Airborne Operations Center (NAOC). The SAOC will provide a worldwide, survivable, and enduring system to fulfill continued national security requirements throughout all stages of conflict. The DAF competitively awarded a contract in April 2024 to Sierra Nevada Corporation. Our goal is to deliver these critical aircraft to recapitalize the E-4B NAOC fleet which is approaching its end of service life in the 2030s.

NUCLEAR SECURITY

Modernizing our weapons systems and their supporting infrastructure is critical. We must also prioritize investments in the security of our nation's nuclear arsenal. To that end, several recapitalization efforts are vital to sustain and enhance the capabilities of our nuclear security forces. The acquisition of new Payload Transporters is essential for bolstering the security of ICBM warheads during transport. These modernized vehicles will provide enhanced protection for our Security Forces Defenders, both in terms of road safety and defense against hostile acts. Similarly, the aging UH-1 helicopters, which have served our ICBM installations for decades, are being replaced by the MH-139A Grey Wolf. The MH-139A program has achieved key milestones, including the delivery of eight MH-139As deployed at Malmstrom AFB. The remaining three are expected to be deployed by the end of 2025. While ongoing work remains on software integration and mission system testing, the DAF and its industry partners are actively collaborating to address these challenges and ensure the timely delivery of a fully capable and effective MH-139A fleet. This modern helicopter will provide a significant enhancement to the security and support of our nation's critical strategic assets.

Additionally, the DAF is replacing its aging High Mobility Multipurpose Wheeled Vehicles (HMMWVs), used for ICBM field security, with modern Armored Utility Vehicles (AUVs). The legacy HMMWVs often struggle in the harsh northern-tier weather, experiencing performance issues and increased maintenance demands due to extreme cold, snow, and ice. This hinders our Defenders' ability to reliably secure these critical assets. The transition to AUVs provides a more robust and reliable platform, ensuring our Airmen can operate safely and effectively in all conditions, maintaining a constant state of readiness. The DAF procured 24 AUVs in FY23/24 and plans to acquire a total of 279 by the end of FY28.

CONCLUSION

The defense of our Nation and the preservation of our way of life necessitate an unwavering commitment to mitigating nuclear threats and assuring allies**.** The United States demonstrates its resolve to these commitments through our nuclear Triad. Each leg of the Triad possesses unique and complementary strengths vital to achieving U.S. deterrence objectives and providing assurances to our allies. While the very existence of nuclear weapons offers a baseline deterrent, assurance for our Allies and partners requires consistent action and unambiguous communication. By unequivocally demonstrating the credibility of our security commitments, we bolster trust with our allies, enhance extended deterrence, and discourage the proliferation of nuclear weapons.

The nuclear Triad remains the bedrock of U.S. strategy to deter strategic threats to the American people, our homeland, and our allies. Neglecting the modernization and recapitalization of our nuclear forces risks rendering these systems inadequate against evolving threats from nuclear-armed competitors and potential adversaries. Such inaction could cede strategic advantage to those who would seek to harm the United States, our allies, and our interests. To maintain effective deterrence, we must invest wisely and act decisively to modernize and recapitalize our forces. The DAF is dedicated to sustaining our current forces and fielding future nuclear programs and capabilities. However, we require the continued support of Congress and timely funding to ensure our nation continues to possess a credible deterrent to safeguard our interests and our way of life.