STATEMENT OF

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INTRODUCTION

United States Strategic Command (USSTRATCOM) is a global warfighting combatant command (CCMD). Our mission is to deter strategic attack through a safe, secure, effective, and credible global combat capability and, when directed, prevail in conflict. Our assigned responsibilities of strategic deterrence; nuclear operations; nuclear command, control, and communications (NC3) enterprise operations; joint electromagnetic spectrum operations (JEMSO); global strike; and missile threat assessment underpin national security and global stability, helping to deter conflicts and achieve Presidential objectives should deterrence fail. The dedicated individuals accomplishing these missions are the foundation of our success, ensuring the safety and security of our Nation and our Allies, 24 hours a day, 365 days a year.

I want to thank the President, Secretary of Defense, and senior department officials for their continued leadership in support of USSTRATCOM's mission areas. I would also like to thank Congress for its continued support in providing us with the resources required to execute our assigned missions. Above all, I extend thanks to the American people for their enduring support of the military. Serving as the USSTRATCOM Commander has been the most rewarding experience of my 39-year career.

Today, the United States, its Allies, and partners are confronted with a deteriorating security environment. The Chinese Communist Party continues to increase its military capabilities and represents our greatest strategic challenge. The Russian Federation continues to modernize and diversify its arsenal, further complicating deterrence. Regional actors, such as the Democratic People's Republic of Korea (DPRK) and an increasingly aggressive Islamic Republic of Iran, add complexity to our strategic calculus. These actors routinely violate international law, challenge the stable and open international system, and take actions around the globe to advance authoritarianism.

The United States achieves peace through strength. Nuclear weapons and the nuclear mission underpin all of our national defense priorities. The United States will maintain flexible nuclear capabilities and tailored deterrence strategies for potential adversaries that reflect our best understanding of their decision-making and perceptions to effectively deter across a spectrum of adversaries, threats, and conflicts.

OUR PEOPLE

People are the cornerstone of our organization—they make deterrence credible. USSTRATCOM relies on a team of nearly 41,000 military, civilian, and contractor personnel steadfast in their dedication to our diverse mission. We must continue to attract, develop, and retain this valuable resource through career-enhancing experiences, targeted professional development, and a robust internship program to ensure personnel are postured to meet challenges ahead.

We are committed to advancing the knowledge base of strategic deterrence theory, NC3, and JEMSO outside of USSTRATCOM—across the DoD, government, academia, Allies, and partners. Beyond education, recruiting talent and increasing the number of science, technology, engineering, and mathematics experts and skilled trade professionals in our Nation's workforce is a national priority—vital to nuclear enterprise modernization initiatives and advancing electromagnetic spectrum (EMS) superiority. Increased focus on these areas is essential to achieve the revitalization of the defense industrial base and Department of Energy national labs to deliver the capabilities we need to execute our assigned missions.

GLOBAL SECURITY ENVIRONMENT

Since my March 2024 testimony, the global security environment has grown more complicated. I continue to emphasize that Cold War strategies are insufficient in today's complex environment. The character of warfare continues to evolve; gray zone tactics, advanced technologies, growing adversary transactional relationships, and economic entanglement between nation-states complicates our decision calculus in ways never imagined during the Cold War. Together with the Services and other CCMDs, we are addressing five evolving threat vectors: cyber, counter-United States space capabilities, novel missile systems, a contested and congested electromagnetic spectrum, and supply chain interdiction.

CHINA

The CCP's nuclear modernization efforts continued throughout 2024. General Secretary Xi Jinping's directive that China be prepared to seize Taiwan by 2027 has driven CCP investment in the expansion of its land-, sea-, and air-based nuclear delivery platforms and the infrastructure necessary to support a major build-up of its nuclear forces. This expansion is complemented by an increasing capacity to create plutonium from fast breeder reactors with Russian support. Despite claiming technologies for these reactors and reprocessing facilities are intended for peaceful purposes, China likely aims to produce plutonium for its weapons program.

Beijing probably continues to load new solid-propellant intercontinental ballistic missiles (ICBMs) into the silo fields that I first reported to you in January 2023. These fields consist of 320 silos across Western China. China has surpassed 600 deliverable nuclear warheads and is forecasted to have over 1,000 nuclear warheads by 2030, many of which will deploy in higher readiness levels. This force is expected to grow through 2035 in line with the People's Liberation Army (PLA) modernization goal of becoming a "world class" military by 2049.

The PLA Navy's six operational JIN-class ballistic missile submarines (SSBNs) represent China's first credible sea-based nuclear deterrent. Each JIN-class SSBN carries up to 12 missiles, and China's next-generation TYPE 096 SSBN will reportedly be armed with longer range sea-launched ballistic missiles (SLBMs). Based on the projected 30-plus-year service life of the platforms, China will operate its JIN and TYPE 096 SSBN fleets into the 2050s.

China's H-6N bomber is capable of carrying air-launched ballistic missiles armed with nuclear warheads; last year, Beijing used H-6Ns for the first time during its ninth combined bomber patrol with Russia. China is also developing a strategic stealth bomber, the H-20, believed to have a range of 5,000 miles and the capability to threaten the continental United States.

RUSSIAN FEDERATION

Russia maintains the largest and most diverse nuclear arsenal in the world—including 1,550 deployed strategic nuclear warheads and up to 2,000 non-strategic nuclear warheads. Russia's non-strategic nuclear warheads are unconstrained by any treaty obligation, and its refusal to negotiate a follow-on to the treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START) means its strategic warheads will be unconstrained after the treaty expires in February 2026.

Russia's ICBM force is comprised of 310 missiles capable of carrying up to 1,200 warheads. Despite recent testing challenges with the RS-28 Sarmat ICBM, Moscow continues to pursue this new ICBM, which has a range of 11,000 miles, the ability to carry multiple nuclear warheads, and a future fractional orbital bombardment capability. Russia's Skyfall nuclear

powered strategic cruise missile remains in testing and has not yet been formally certified for combat.

The sea-based leg of Russia's triad is comprised of at least 10 DELTA and BOREI-class SSBNs equipped with up to 16 SLBMs each, and the fleet is capable of carrying more than 700 warheads. The Russian Strategic Navy continues to modernize by adding new BOREI-class submarines and deploying new SS-N-32 SLBMs. Russia is also developing the submarine-deployable Poseidon autonomous underwater vehicle, which may be armed with a two-megaton nuclear payload. Lastly, Russia's multi-mission Severodvinsk SSGNs are armed with long-range KALIBR cruise missiles designed to destroy enemy ships and land-based targets.

Russia's air-leg has up to 70 strategic bombers—comprised of the Tu-95MS Bear and the Tu-160 Blackjack—which are being modernized to operate beyond 2030. The Bear can carry up to 16 AS-15 nuclear-armed cruise missiles, while the Blackjack can carry up to 12. Both aircraft are capable of carrying nuclear gravity bombs. Moscow will complete development of its new PAK-DA bomber within a decade, which will include stealth capabilities and employ both conventional and nuclear armament.

Russia's hypersonic weapons, such as the Kinzhal, Tsirkon, and Avangard, provide Moscow with a myriad of escalation options within its portfolio. These weapons present intercept challenges to current air defense systems. Finally, we remain concerned that Russia may intend to put a space-based nuclear weapon on orbit. Placing the first nuclear-armed weapon in space would be destabilizing.

DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA

In 2024, Kim Jong Un vowed to intensify efforts to make his nuclear force fully ready for combat with the United States. Since 2006, North Korea has conducted six underground nuclear

tests, each successively demonstrating a higher explosive yield. Pyongyang also continues to increase its stockpile of plutonium and highly enriched uranium in support of its nuclear program.

In addition to stockpiling nuclear materials, the DPRK has routinely conducted ballistic missile flight tests and training launches and has expanded both the number and type of nuclear-capable delivery systems. North Korea launched two solid-propellant ballistic missiles purportedly loaded with hypersonic payloads in 2024 and debuted a new, more powerful solid-propellant ICBM. Increasing reliance on solid-propellant systems allows Pyongyang to launch missiles with much less warning than before.

The DPRK continues to make progress on its sea-based platforms. In 2023, North Korea claimed to unveil a tactical nuclear warhead capable of being mounted on at least eight delivery systems, including an unmanned underwater vehicle. In 2024, Kim Jong Un inspected a project to construct the country's first SSBN, although this capability is unlikely to be realized in the next decade.

ISLAMIC REPUBLIC OF IRAN

The Islamic Republic of Iran continues to expand its nuclear program by increasing its stockpile of highly enriched uranium and deploying additional advanced centrifuges. Tehran has reduced the time required to produce sufficient weapons-grade uranium for a nuclear device from 10-15 days to presumably less than one week.

Iran possesses the region's largest arsenal of conventional ballistic missiles, which it employed in attacks on Israel last year. Tehran continues to proliferate advanced conventional weapons to non-state militia groups across the Middle East, resulting in attacks against U.S. and partner personnel and interests, undermining regional stability. Iran's work on space-launch

vehicles—including its two-stage, liquid-fueled Simorgh satellite carrier rocket—likely shortens the timeline to produce an ICBM due to the similarities in technology. This rocket could have a 2,400 mile range with a 2,200 pound payload.

GROWING TRANSACTIONAL RELATIONSHIPS

A defining feature of today's evolving strategic environment is the increasing prevalence of transactional relationships amongst nuclear-armed competitors and nuclear aspirants. Technology exchanges, troop deployments, combined exercises, and public affirmations of each other's violations of international law are increasing. The possibility of simultaneous conflicts makes complex escalation dynamics even more challenging.

China's "comprehensive strategic partnership of coordination" with Russia entails an increasing degree of military cooperation. Sino-Russian cooperation occurs through exchanges of training, equipment, technology, high-level visits, and other coordination mechanisms. Beijing is Moscow's top supplier of machine tools, microelectronics, and nitrocellulose—all critical to making munitions and rocket propellants—and Russia is using these items to ramp up its defense industrial base and circumvent extensive sanctions.

Iran and the DPRK are also contributing to the war in Ukraine. Tehran has been providing armed drones to Russia since 2022, as well as transferring hundreds of short-range ballistic missiles to Moscow and training personnel to operate these weapons. The DPRK has delivered over 11,000 troops and 16,500 containers of weapons and ammunition to Russia, including ballistic missiles, launchers, and millions of artillery rounds. Moscow has also signed a security pact with Pyongyang, which reportedly includes a mutual defense clause.

ACCOMPLISHING THE MISSION: THE TRIAD AND OTHER CORE FUNCTIONS

To address the challenges posed by the complex security environment, the United States must remain committed to sustaining legacy triad systems and completing the multi-generational, decades-long modernization of the nuclear deterrent, including all three legs of the triad and critical NC3 systems. As we modernize our capabilities, we must retain credible forces to deter strategic attacks, assure Allies and partners, and achieve U.S. objectives should deterrence fail. I urge Congress to continue supporting these critical sustainment and modernization efforts.

LAND-BASED TRIAD COMPONENT

The land-leg of the triad is our most responsive strategic deterrent option. It is a geographically dispersed, reliable, always-on-alert force with a robust NC3 system that guarantees receipt of emergency action messages from the President. Our Minuteman III ICBMs raise the threshold for any adversary considering a strike against the United States, because no adversary can be confident in its ability to destroy our ICBMs prior to launch. Our ICBMs are also rapidly re-targetable, enabling the necessary flexibility and adaptability in executing against multiple adversaries armed with diverse systems.

Minuteman III

Always ready, the MMIII continues to achieve a 98% mission capable rate with missiles on alert 24/7/365—a testament to the ability and steadfast dedication of our maintenance professionals. Asset attrition, aging, parts obsolescence, and sustainment shortfalls present operational challenges. Sustaining this capability until its replacement is fielded requires continued national investment to address specialized equipment and replacement parts

availability. MMIII must remain an operationally effective and credible deterrent until fully replaced by the Sentinel ICBM.

Sentinel

Sentinel's accuracy, range, responsiveness, safety, security, and sustainment capabilities will ensure the ICBM force remains a potent warfighting capability and a credible land-based nuclear deterrent through at least 2080. A complex mega-project replacing every facet of the MMIII, Sentinel will be accompanied by a secure and robust NC3 capability, a new missile, and hundreds of infrastructure projects, including hardened facilities spread across five states. The program consists of ICBM silos, thousands of miles of modern fiber optic cabling, acquisition of permanent and temporary real estate easements, and operational site activation efforts necessary to support the construction workforce and development of the Sentinel weapon system.

Any further Sentinel delay will increase USSTRATCOM's operational risk and impact the credibility of our deterrent. Despite the Sentinel program experiencing a critical Nunn-McCurdy breach last year, subsequent analysis revalidated program requirements and deemed Sentinel essential to national security. I remain committed to replacing the MMIII and support efforts to reduce Sentinel's cost and schedule risk.

SEA-BASED TRIAD COMPONENT

The sea-leg is the most survivable leg of the triad. The OHIO-Class SSBN fleet, paired with the Trident II D5 Strategic Weapon System, patrols the world's oceans virtually undetected, providing a resilient, reliable, and assured capability vital to the defense of the United States and our Allies and partners. Minimizing delays to delivery of the COLUMBIA-Class SSBN will guarantee the nation has survivable nuclear response options for decades to come.

OHIO-Class SSBN

The fourteen OHIO-Class submarines represent seventy-percent of our Nation's day-to-day nuclear capabilities. While a sufficient deterrent today, the fleet has been life extended to an unprecedented 42 years and will continue to face sustainment and readiness challenges until replaced by COLUMBIA-class submarines. OHIO will start decommissioning about one hull per-year beginning in 2027. USSTRATCOM, in close collaboration with DoD partners, is actively working risk reduction options, including life extension of select OHIO SSBN hulls to provide margin and SSBN operational readiness if COLUMBIA's first deterrent patrol is delayed.

COLUMBIA-Class SSBN

The COLUMBIA program of record (POR) will deliver at least 12 SSBNs, the absolute minimum required to meet strategic guidance. A life-of-hull reactor, improved combat control systems, electric propulsion drive, and other technological advancements will deliver unparalleled operational capabilities and stealth to ensure our SSBN fleet maintains its strategic advantage in the undersea domain into the 2080s. The COLUMBIA-class SSBN remains a high USSTRATCOM priority strategic deterrent program and must achieve its first strategic deterrent patrol by 2031 to avoid an unacceptable capability gap. USSTRATCOM will continue assessing capacity and capability across the nuclear triad to meet future demands and operational requirements.

Trident II D5

The Trident II D5 is the latest generation of submarine-launched fleet ballistic missiles. The Trident II D5 life extension 2 (D5LE2) program will field a modern, reliable, flexible, and

effective missile with advanced technology capable of adapting to emerging threats. D5LE2 is essential to support COLUMBIA-class SSBNs and requires timely and sufficient funding to ensure a viable SSBN deterrent through the 2080s.

Sea-Launched Cruise Missile – Nuclear (SLCM-N)

The SLCM-N, established as a new POR by the fiscal year 2024 (FY2024) National Defense Authorization Act (NDAA), will provide additional at-sea nuclear deterrent capability. This program will provide much-needed low-yield, non-ballistic, survivable, and persistent nuclear capability without visible generation, offering additional range, flexibility, and survivability for extended deterrence and assurance.

Anti-Submarine Warfare

Undersea systems have become a critical focus area of potential adversaries, resulting in threats more challenging to detect and counter. The Navy's Integrated Undersea Surveillance System (IUSS) provides vital information about submarine and surface ship operations, which is instrumental in enabling U.S. forces to maintain favorable tactical and strategic positions while supporting deterrent patrol operations. Russian submarine stealth and detectability advancements have made IUSS modernization an imperative. Additionally, to maintain our fleet's acoustic advantages in the undersea domain through OHIO to COLUMBIA modernization and beyond, supporting advanced modifications of large vertical arrays, advanced materials science and coatings, and other efforts within the Acoustic Superiority Program are absolutely necessary.

AIR-BASED TRIAD COMPONENT

The air-leg is the most flexible and visible leg of the triad. Bombers enable the United States to signal resolve while providing a flexible and recallable option to address escalation in conflicts or crises. The air-leg supports both strategic deterrence and conventional employment options around the globe to achieve national objectives.

B-52H Modernization

The B-52H is a 65-year-old platform slated to remain in service for at least another 25 years. It is critical to providing flexible strategic deterrence options to the President and is the threshold platform to carry the Long Range Standoff (LRSO) weapon. B-52H modernization upgrades include the Commercial Engine Replacement Program, Radar Modernization Plan, survivable NC3, and improved GPS reception via M-Code Resilient Embedded GPS Inertial Navigation systems.

Replacing the B-52H's 1960s-era engines will enable longer range and solve supply chain issues afflicting the legacy engines. The modernized radar will increase system reliability and reduce sustainment costs while providing new high-resolution ground mapping capabilities to improve target location accuracy. The Air Force is incorporating an advanced, survivable, secure, two-way strategic nuclear communications capability into the B-52. Continued and consistent Congressional funding and support to the Air Force to complete B-52 modernization programs is critical.

B-2 Modernization

The B-2 fleet remains the world's only low-observable bomber able to penetrate denied environments while employing a wide variety of munitions against high-value strategic targets.

With advancements and proliferation of anti-access and area denial technology, the capabilities provided by the B-2 remain critical to strategic deterrence and our ability to execute missions around the globe. The Air Force must continue targeted B-2 modernization and sustainment efforts until sufficiently replaced by the B-21. These efforts include low-observable signature and supportability modifications, updated secure beyond-line-of-sight and line-of sight communications capabilities, updated cockpit displays, compliance with DoD and NATO secure combat identification requirements, and cryptographic upgrades.

B-21 Raider

The B-21 Raider will form the backbone of America's future bomber force, replacing conventional B-1 bomber and nuclear-capable B-2 bomber fleets. The B-21 will ensure USSTRATCOM's ability to penetrate advanced air defenses far into the future and will provide strategic and operational flexibility across a wide range of military objectives. The program is on track to meet USSTRATCOM operational requirements, with the first aircraft scheduled for delivery in the late 2020s. The B-21 POR is for a minimum of 100 aircraft, which we assess as the minimum necessary to meet both nuclear operations and global strike requirements. Consistent funding of the B-21 program will prevent operational shortfalls in the bomber force and facilitate on-time delivery of this exceptional combat capability.

Air-Launched Cruise Missile / Long Range Standoff Weapon

The Long Range Standoff (LRSO) weapon will replace the Air Launched Cruise Missile (ALCM) as our Nation's air-delivered standoff nuclear capability. It is optimized for the future with a planned 30-year service life. The LRSO weapon will provide the President with flexible and scalable options capable of penetrating and surviving against advanced air defenses—a key

attribute and critical component to all USSTRATCOM operational plans. It is on track for production and deployment in FY2027 with planned initial operational capability in FY2030.

Tanker Support

The demand for tankers across Combatant Commands continues to grow. A robust tanker fleet is essential to sustaining global reach for all USSTRATCOM missions. The KC-135 serves as the backbone of U.S. air refueling capability. Tanker modernization and expansion efforts are imperative for concurrent operations encompassing strategic, theater, and homeland defense missions across CCMDs.

The KC-46 complements the legacy KC-135 tankers with increased capabilities and will be capable of refueling most fixed-wing, receiver-capable aircraft. We support Air Mobility Command's collaboration with the Air Force Nuclear Systems Center to certify the KC-46 for nuclear operations as soon as possible. We also endorse the Air Force's broader efforts to increase tanker connectivity and survivability while accelerating the growth and capacity of our tanker fleet.

Regional Deterrence Capabilities

Following the dissolution of the Soviet Union, America divested nearly all of its theater nuclear capabilities through the Intermediate Range Nuclear Forces Treaty, the Presidential Nuclear Initiatives, and other force posture decisions. The United States' forward deployed nuclear weapons in Europe are critical to NATO's nuclear deterrence. Unfortunately, the past decade has been marked by authoritarian regimes seeking quantitative and qualitative advancements in both strategic and theater nuclear capabilities. Russia, China, and North Korea are developing theater nuclear weapons in an attempt to offset the United States' and its Allies'

asymmetrical conventional superiority and to create deterrence challenges of their own at the regional level. USSTRATCOM will continue to work with U.S. European Command and other CCMDs to explore how U.S. nuclear forces can bolster regional deterrence in circumstances where potential U.S. adversaries possess a range of delivery modes, explosive yields, and existing and soon-to-be fielded systems.

NUCLEAR COMMAND, CONTROL, AND COMMUNICATIONS (NC3) ENTERPRISE

The President's ability to command, control, and communicate with the Nation's nuclear forces must remain effective and resilient under all circumstances—through all phases of conflict including strategic attack. Ongoing NC3 modernization efforts permit replacement of our legacy capability, provide enhanced missile warning, upgrade national-level conferencing backbone connectivity and security, and expand Presidential decision space. I appreciate Congressional support in ensuring a whole-of-government, national-level, modernized, cyber-instrumented, resilient conferencing capability integrated across stakeholders for shared operational situational awareness and decision-making.

NC3 Operations – Sustainment of Legacy Capabilities

In coordination with the Office of the Under Secretary of Defense for Acquisition and Sustainment (OUSD(A&S)) and other DoD stakeholders, we are employing the Detect, Decide, Direct mission framework to assess the NC3 enterprise, sustain legacy systems, and pursue modernization. The Detect component includes ground-based radars, satellites, and intelligence sources to provide situational awareness, warning, attack assessment, and status of friendly forces. The Decide component encompasses a robust combination of terrestrial-, aerial-, and space-based systems providing the President, advisors, and military commanders sufficient time

to consider options and decide on appropriate actions to maintain or restore deterrence. The Direct component consists of systems connecting the President to the Nation's nuclear forces to disseminate decisions under all conditions.

The DoD and the Nation are reliant on aging NC3 systems with a no-fail mission. As with the triad, we must sustain these systems until the next generation of NC3 is fielded. Key focus areas for USSTRATCOM include: the Survivable Airborne Operations Center (SAOC), E-130J Take Charge and Move Out (TACAMO) recapitalization, satellite communications, missile warning/missile tracking systems, the ground-based components of NC3 such as the Fixed Submarine Broadcast System radio transmitter sites, and securing data and information processes in cyberspace.

NC3 Modernization – Next Generation Capabilities

We are pursuing materiel and non-materiel solutions to address challenges to the enterprise through the development of next generation capabilities. In the last year, USSTRATCOM published three Joint Requirements Oversight Council-validated NC3 Initial Capabilities Documents (ICDs), and we expect to publish six more in FY2025. These ICDs are focused on interoperability, adaptability, and providing assured nuclear command and control under all conditions. With OUSD(A&S) and OUSD for Research & Engineering, we are teaming with the Services, academia, national laboratories, and industry to explore emerging technologies through prototypes, demonstrations, and experimentation. Furthermore, we are conducting a series of trade-space studies to accelerate modernization of the enterprise.

NC3 Cybersecurity and Artificial Intelligence / Machine Learning Capabilities

In close partnership with key stakeholders, USSTRATCOM is leading the DoD's efforts to improve NC3 enterprise system and network sensing, monitoring, and response capabilities necessary to detect attempted intrusions and prevent unauthorized access or denial of service. Key to long-term viability is cybersecurity integration and sustainment throughout program lifecycle and tailored incorporation of artificial intelligence / machine learning (AI/ML) and advanced data analytics for improved situational awareness and timely response.

The Congressionally directed and USSTRATCOM-led Cyber Instrumentation Pilot (CIP) is intended to deliver an effective, advanced, rapid, and standards-based construct for NC3 cybersecurity from the edge to the enterprise. Designed to be hardware agnostic, the CIP is interoperable with other analytic tools within the NC3 enterprise to achieve efficiencies and accelerate capability delivery tailored for each site and platform.

USSTRATCOM will use AI/ML to enable and accelerate human decision-making. To fully utilize the potential of AI, USSTRATCOM requires data scientists with expertise in AI and advanced platforms across multiple classifications. Opportunities exist to leverage the emerging digital engineering environment to bridge the gap toward adopting AI/ML into the nuclear systems architecture. AI will remain subordinate to the authority and accountability vested in humans. In all cases, the United States will maintain a human "in the loop" for all actions critical to informing and executing decisions by the President to initiate and terminate nuclear weapon employment.

JOINT ELECTROMAGNETIC SPECTRUM OPERATIONS (JEMSO)

The EMS is a critical maneuver space in modern warfare. Understanding the impact a contested and congested EMS environment has on our forces' ability to operate is imperative.

The standup of the USSTRATCOM JEMSO Center (JEC) in 2023 effectively established a much-needed singular voice as the operational lead for the Joint Force EMS enterprise. The JEC provides JEMSO support to CCMDs and partner nations, supports joint force training and readiness, and assesses and develops recommendations for the Chairman of the Joint Chiefs of Staff to provide military advice regarding JEMSO capabilities and guidance. Updating the previous global assessment conducted in 2023, we developed a novel, data-centric, model-based methodology to analyze the effectiveness of Joint Force EMS capabilities through an interactive wargame. In 2024, the JEC also established a program designed to identify shortfalls by standardizing the field-training exercise evaluation of the Services' ability to conduct JEMSO.

Force readiness requires training and exercising in operationally realistic representative environments—a difficult challenge due to increasing demands for spectrum. The JEC is working with the Joint Staff and DoD Chief Information Officer (CIO) to ensure regulators fully understand the operational impact of sharing or vacating specific spectrum bands. The JEC also participates in the Partnering to Advance Trusted and Holistic Spectrum Solutions (PATHSS) working group—bringing together DoD, industry, national laboratories, and academia to develop and demonstrate dynamic spectrum sharing technologies. Additionally, the team is coordinating with the Federal Aviation Administration (FAA) to improve GPS testing, training, and exercise processes to optimize training range availability in support of the FY2024 NDAA. By ensuring unfettered access to identified EMS bands, we can continue to ensure the safety and security of our Nation, our Allies, and our partners.

EFFECTS INTEGRATION

USSTRATCOM does not command or control all of the elements required to execute a deterrence strategy. The Nuclear Employment Strategy of the United States requires integration

of non-nuclear capabilities into U.S. nuclear planning where non-nuclear capabilities can support the nuclear deterrence mission. The growing risk of conflict with a nuclear-armed aggressor has solidified support for effects integration. A robust set of nuclear and non-nuclear capabilities, effective across a range of potential conflict scenarios, is necessary to successfully conclude conflict while managing escalation. As part of our deterrence strategy, USSTRATCOM is expanding efforts towards Conventional Nuclear Integration (CNI).

CNI encompasses more than kinetic conventional support to nuclear operations and requires the integration of non-kinetic capabilities to complement and enhance nuclear operations. Operations in the information environment (OIE) capabilities—to include cyber, space, EMS operations, military information support to operations (MISO), and public affairs capabilities—should be leveraged to influence the decisions of competitor leadership. The integrated employment of these forces and capabilities, combined with conventional and nuclear operations, must be considered throughout all phases—from competition to conflict.

USSTRATCOM—in partnership with seven CCMDs, the Joint Staff, Army, Air Force, and Navy—is in the midst of a two-year Joint CNI Test to develop a concept of operations (CONOP) that describes the process for developing CNI options during competition. The intent for this CONOP is to be ready for refinement in crisis and executable in combat upon approval. This effort is informing the conventional munitions requirements process to support previously unaddressed CNI operational requirements and to ensure the United States is postured effectively.

Conventional Kinetic Operations

Two decades ago, USSTRATCOM recognized the need for a conventional prompt global strike weapon system to hold distant, defended, and/or time-critical threats at risk when other

forces are unavailable, incapable, or not preferred. The need for these weapons is more important today as we witness the rapid expansion of adversary military capabilities and rising tensions around the world. USSTRATCOM will use long-range precision strike conventional munitions to enhance the traditional capabilities inherent in the nuclear triad and implement CNI initiatives, in turn bolstering deterrence capabilities in support of strategic deterrence.

Hypersonic weapons provide a highly responsive, long-range, non-nuclear strike capability to hold critical targets at risk across all stages of conflict. Hypersonic weapons will also mitigate shortfalls in current standoff conventional weapons capacity and capability. We support the Services' continued development of hypersonic weapon systems through flight test programs, robust modeling and simulation, and ground testing.

USSTRATCOM continues to advocate for rapid development and fielding of advanced conventional capabilities, including the Army's Long Range Hypersonic Weapon and Navy's Conventional Prompt Strike. Partnerships leveraging commercial infrastructure and launch vehicle providers significantly increase the Nation's capacity for ground and flight testing of hypersonic payloads and technologies. These efforts are critical to pace the current threat and to field transformational capabilities within the Future Years Defense Program.

USSTRATCOM led concepts of operation and employment initiatives and has developed tactics, techniques, and procedures to ensure hypersonic weapons are ready to employ on day one of fielding. These weapons will directly contribute to USSTRATCOM fulfilling its assigned responsibilities of strategic deterrence and global strike. We will continue to work with the Services and the Joint Staff to codify and integrate CNI munition requirements into the munitions requirements process.

The Asymmetric Advantage of Allies & Partners

U.S. Allies and partners are a critical component of deterrence and provide an asymmetric advantage that potential adversaries cannot outmatch. China, Russia, DPRK, and Iran do not integrate as we do through planning, exercising, and combined operations. The relationships and mutual commitments the United States has with its Allies and partners are grounded in a shared set of systems and values.

USSTRATCOM is committed to enhancing combined force interoperability. USSTRATCOM components have significantly increased Allied integration in the maritime and air domains, and we are on a path to conduct effective CNI in the near future. Last year, our SSBN forces integrated across five CCMDs and five Allied nations, successfully synchronizing near-simultaneous Pacific, Atlantic, and Caribbean submarine operations. Our Bomber Task Force global campaign operations included over 200 days of overseas presence, 140+ missions in partnership with all CCMDs, and integration with 35 partner nations in FY2024—effectively projecting U.S. global strike power and interoperability.

Exercises and Wargames

We train as we fight, and any real-world conflict requiring USSTRATCOM to restore deterrence will—by the very nature of global conflict—require the participation of other CCMDs, government agencies, and Allies and partners. Exercises and wargames are designed to demonstrate the Command's ability to execute all facets of our Unified Command Plan (UCP) assigned mission areas, ensuring we maintain readiness at the highest levels.

USSTRATCOM annually sponsors two strategic and operational-level wargames focused on political-military decision-making research. Both Deterrence and Escalation Game and Review (DEGRE) and POWER uniquely challenge strategic thinking and decision-making,

along with the Joint Staff's series of Globally Integrated Exercises (GIE) and Globally Integrated Wargames. These wargames incorporate strategic deterrence, assurance, and escalation dynamics to inform whole-of-government, CCMDs, and Allies on full spectrum warfighting against a reactive nuclear-armed adversary.

In 2024, USSTRATCOM conducted two CCMD strategic-level joint exercises and 25 component operational-level exercises. We will continue to work with the CCMDs and Joint Staff to focus on improving NC3 capabilities through the Chairman's Exercise Program, incorporate EMSO-centric learning objectives, and synchronize efforts and collateral initiatives to deter conflict and prepare the Joint Force for future conflict if deterrence fails.

ACCOMPLISHING THE MISSION: INDUSTRY, INFRASTRUCTURE & SECURITY

USSTRATCOM cannot accomplish its mission without industry support, a robust and resilient infrastructure, and the security apparatus that supports the triad and our core functions. These key enablers ensure our weapons and delivery platforms are designed and manufactured to fight and win today and into the future.

NATIONAL AND DEFENSE INDUSTRIAL BASE

A healthy industrial base that can provide advanced technology, capability, and capacity on-time is fundamental to our ability to compete strategically. We must have steady and continuous production from the Department of Energy's National Nuclear Security Administration (NNSA) facilities as it is a force multiplier for national defense and strategic deterrence. In alignment with the 2023 DoD National Defense Industrial Strategy, we advocate to expand stockpiles of the critical parts, finished goods, and commodities needed to meet production requirements for conducting sustained campaigns against adversaries.

Submarine Industrial Base

The number of submarine industrial base (SIB) suppliers reduced from approximately 17,000 in the post-Cold War period to nearly 5,000 today. This reduction is not without cost, as production levels will shape the Nation's undersea dominance and sea-based strategic deterrence well into the 2080s. Current shipyard infrastructure capacity is insufficient to accommodate the one COLUMBIA-class SSBN plus two VIRGINIA-class SSNs per-year build plan (1+2 build plan) by FY2026 (the year in which COLUMBIA-class serial production starts). Thanks to Congressional support to date to increase SIB capacity to meet this 1+2 build plan, we are making progress to ensure the Navy remains the world's preeminent submarine force.

STOCKPILE AND WEAPONS INFRASTRUCTURE

Today's stockpile is sufficient to achieve current strategic deterrence objectives. Sustaining this for the long term will require confidently assessing the performance of aged weapons until they can be replaced, on-time fielding of replacement weapons, and the infrastructure to support both. While we can currently mitigate these risks, they do potentially impact the long-term viability of weapons in all three legs of the strategic triad.

The credibility of strategic deterrence relies on the effectiveness of the stockpile and the infrastructure needed to maintain the current weapons while producing modern replacements. This requires a Nuclear Security Enterprise (NSE) with efficiencies in development and production processes, modular weapon designs to enable rapid adaptability to meet emerging needs, and an enterprise-wide science, technology, and engineering (ST&E) effort to enable the development and maturation of technologies outside of specific stockpile programs. These attributes will move us towards a resilient and responsive enterprise and build the residual capacity to respond to uncertainty without impacting planned PORs. As we undertake our

stockpile modernization POR, the W93 is the first practical opportunity to "design in" modularity and begin to field the infrastructure and ST&E portfolio we will need for the future. My staff submitted requirements for both the ballistic missile and the air-delivered nuclear weapons to guide development of the next generation of nuclear warheads.

Stockpile modernization efforts reached significant milestones in 2024. The NNSA completed the first production unit for a war reserve W87-1 plutonium pit, and is now working towards rate production of 30 pits per-year at Los Alamos National Laboratory and 80 pits per-year overall. Re-establishing a credible plutonium pit manufacturing capability remains the top stockpile priority, but we must not lose sight of other initiatives—including uranium manufacturing, high explosives manufacturing, lithium processing, tritium production, radiation-hardened electronics production, and non-nuclear components production. Continuous production is absolutely necessary to ensure the United States is postured to address long-term challenges.

Additional stockpile modernization progress was achieved with completion of the B61-12 life extension program and the W88 Alteration 370 program remains in full-scale production; the B61-13 was also established as a POR. As with infrastructure modernization, considerable work remains to modernize the nuclear weapons stockpile, including the air-leg's W80-4, the land-leg's W87-1/Mk21A, and the sea-leg's W93/Mk7. It is imperative these programs remain on track or the Nation will continue to rely on older weapons with increasing uncertainty in their viability into 2040 and beyond.

NUCLEAR SECURITY

We employ a range of active and passive security measures to ensure protection of our weapons, systems, bases, structures, and personnel from damage or loss. As we continue to

assess and analyze threats to fielded forces and strategic capabilities, we will shape and advocate for programs to close security gaps and maintain stringent security standards to deter, detect, delay, deny, and defeat threats.

MH-139A Grey Wolf Helicopter

The MH-139A increases the overall protection of our nuclear arsenal by providing an enhanced rapid response against threats to our land-based ICBM infrastructure. In 2024, seven MH-139As were delivered to Malmstrom Air Force Base (AFB); F.E. Warren AFB and Minot AFB are projected to receive their first MH-139As in FY2026 and FY2027, respectively. When compared to the legacy UH-1N, the MH-139A provides enhanced speed, range, endurance, payload, and survivability.

Weapon Generation Facility

Existing Weapon Storage Areas (WSA) house the Nation's most critical weapons. The Air Force's Weapon Generation Facility (WGF) recapitalization program will replace 1960s-era WSAs with a modern, reinforced facility to house nuclear weapons maintenance, storage operations, and weapon generation activities under one roof. These WGFs are vital to security, sustainment, and fielding of Sentinel, B-21, and the LRSO weapon. Planned WGFs are required at ICBM bases (F.E. Warren AFB and Malmstrom AFB), bomber bases (Barksdale AFB, Ellsworth AFB, Dyess AFB, and Whiteman AFB), and the dual-mission ICBM/bomber base (Minot AFB).

Uncrewed Systems (UxS)

The proliferation of UxS in multiple domains with increasing technological sophistication poses a challenge to the Department and our Nation's nuclear enterprise. The lethality of UxS in conflict zones worldwide compels urgency in fielding effective countermeasures. USSTRATCOM seeks highly effective counter-uncrewed system capabilities and authorities to protect strategic assets and critical installations. We urge Congress to continue supporting development of UxS detection and tracking capabilities and countermeasures to ensure strategic options for the President to meet the challenges of an evolving strategic environment.

Missile Threat Assessment

Maintaining USSTRATCOM's ability to deter and respond to strategic attack by potential adversaries requires defenses against all types of advanced missiles and other novel delivery systems. Pursuant to the January 27, 2025, Executive Order on the Golden Dome for America, and in cooperation with the Office of the Secretary of Defense, U.S. Northern Command, and other DoD stakeholders, we are actively assessing strategic missile threats and prioritizing a set of locations to defend against a counter-value attack by nuclear-armed adversaries. Defending North America and our interests around the globe—to include the Arctic—is inherently linked to the ability of the Joint Force to operate. We also support improvements in early warning, identification, tracking, discrimination, and attribution for the full range of advanced air and missile threats to the homeland and our strategic forces to support U.S. Space Command's trans-regional missile defense responsibilities.

CONCLUSION

USSTRATCOM's mission is more important than ever. Our focus remains to deter strategic attack on the United States and its Allies and partners, and we stand ready to respond to threats anywhere, anytime, across all domains. I have full faith and confidence in the safety, security, effectiveness, and credibility of our Nation's strategic deterrent due to the proficiency and professionalism of the dedicated Soldiers, Sailors, Airmen, Marines, Guardians, and civilians committed to our mission. With continued Congressional support and stable, on-time funding, USSTRATCOM will continue to effectively defend the Nation and preserve peace for future generations.