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Feature Report

“Sustaining the U.S. Nuclear Deterrent: The LRSO and GBSD”. By Mark Gunzinger, Carl Rehberg, Gillian Evans. Published by Center for Strategic and Budgetary Assessments (CSBA); April 11, 2018

<https://csbaonline.org/research/publications/sustaining-the-u.s.-nuclear-deterrent-the-lrso-and-gbsd>

The threat of nuclear attack by a great power or a rogue state is a major reason why every U.S. administration since the end of the Cold War has validated the need to maintain a safe, secure, and credible nuclear triad. Russia maintains a large stockpile of nuclear warheads and continues to adhere to military doctrine that indicates it might be willing to use nuclear weapons to coerce the United States and its allies in a crisis. Both Russia and China are funding multiple programs to modernize their nuclear arsenals, and the proliferation of advanced military technologies has allowed North Korea to fast-track its nuclear weapons development program.

Given this context, CSBA’s new report assesses arguments that have been made for and against replacing DoD’s nuclear Air-Launched Cruise Missile (ALCM) with the Long-Range Standoff (LRSO) weapon, and modernizing its Minuteman III ICBM force with the Ground-Based Strategic Deterrent (GBSD). DoD has invested hundreds of millions of dollars to extend ALCMs and Minuteman IIIs far past their original planned service lives. Today, it is increasingly apparent that these Cold War-era weapon systems will not meet future requirements, and further delaying their replacements could result in ALCM and Minuteman III inventories falling below the level needed to sustain the U.S. strategic deterrent posture.

TABLE OF CONTENTS

NUCLEAR WEAPONS

- [B-21 Bomber on Track for First Test Flight in Late 2021](#) (National Defense)
The aircraft is expected to be a long-range stealth bomber capable of carrying nuclear or conventional weapons.

US COUNTER-WMD

- [US, Israel's Arrow-3 Missile Put to the Test in Alaska](#) (Defense News)
The tests were a joint effort between the Israel Missile Defense Organization of the Directorate of Defense Research and Development and the U.S. Missile Defense Agency.
- [How a New Missile Warning System Benefits Industry](#) (C4ISRNET)
The Air Force's Next Generation Overhead Persistent Infrared system will consist of five satellites providing advanced warnings of missile attacks on the United States, its deployed forces and its allies.

US ARMS CONTROL

- [Talks Held in Vienna to Salvage Iran Nuclear Deal](#) (BBC)
After meeting officials from Britain, France, Germany, Russia and China in Vienna, a senior Iranian official said the atmosphere had been "constructive".
- [Trump Says He's Not Concerned about North Korean Missile Tests](#) (The Hill)
Trump brushed aside the message, noting it did not include a threat toward the United States.

COMMENTARY

- [Minerals Essential for National Security](#) (The Hill)
The U.S. relies on imports for 93 percent of its uranium needs, and dependence on foreign nuclear-fuel is expected to reach almost 99 percent by the end of this year.
- [Compete or Not, But Go Full Steam Ahead on GBSB](#) (Breaking Defense)
We have to understand as Gen. John Hyten, head of Strategic Command, has said, the country's ability to extend the current 49-year life of the existing Minuteman III land-based missile is limited.
- [If New START Dies, These Questions Will Need Answers](#) (Defense One)
Unlike in 2009 and 2010, when New START negotiations were underway, Russia is vigorously modernizing its nuclear arsenal.

NUCLEAR WEAPONS

National Defense (Arlington, Va.)

B-21 Bomber on Track for First Test Flight in Late 2021

By Connie Lee

July 24, 2019

The Air Force plans to fly the B-21 Raider for the first time around December 2021, according to the service's vice chief of staff.

"I've got a little software app on [my phone]. It's counting down the days," Gen. Stephen Wilson said July 24 during remarks at a Mitchell Institute for Aerospace Studies event in Washington, D.C. "I think it's something like 863 days to first flight for B-21."

The aircraft is expected to be a long-range stealth bomber capable of carrying nuclear or conventional weapons. Northrop Grumman is the prime contractor on the effort. The program is being shepherded with a great deal of secrecy by the Air Force's Rapid Capabilities Office, which is tasked with pushing selected high-priority projects through the acquisition process faster.

A critical design review for the program was conducted earlier this year and the service is currently working on software integration, Wilson noted.

Last month, Air Force Chief of Staff Gen. David Goldfein said the B-21 was on track to debut in the mid-2020s.

"The recent critical design review went very well, and as a result our confidence remains very high in this program," he said June 26 at a Mitchell Institute event. "We're closely monitoring the build of the initial test aircraft and associated software to support the first flight."

The Air Force plans to buy at least 100 new stealth bombers.

Meanwhile, the service is working to modernize and improve its legacy systems such as the B-52 Stratofortress and B-2 Spirit. One recapitalization effort involves installing new engines on the Stratofortress so the platforms can keep flying until the 2050s. A contract award for the new engine is slated for fiscal year 2020.

"We're planning on investing in the B-52 to give it the capability that it needs moving forward," Wilson said.

Additionally, the service is contemplating what mix of bombers it should have in the future. Air Force leaders have said they need more squadrons in the fleet by 2030 to execute the national defense strategy, which focuses on great power competition with China and Russia. The B-1, B-2 and B-52 are no longer in production, so the service will need to determine how many Raiders to buy and the number of legacy aircraft to keep flying.

"The general premise is we don't have enough long-range strike capacity," Wilson said. "I'm working with our analysis and teams to figure out what exactly that force structure balance is."

<https://www.nationaldefensemagazine.org/articles/2019/7/24/air-force-plans-for-2020-b-21-first-flight>

[Return to top](#)

US COUNTER-WMD

Defense News (Washington, D.C.)

US, Israel's Arrow-3 Missile Put to the Test in Alaska

By Jen Judson

July 28, 2019

WASHINGTON — Arrow-3 missiles successfully took out target missiles in high-altitude, hit-to-kill test engagements conducted at the Pacific Spaceport Complex-Alaska in Kodiak.

The tests were a joint effort between the Israel Missile Defense Organization of the Directorate of Defense Research and Development and the U.S. Missile Defense Agency.

Israel Aerospace Industries and Boeing co-developed Arrow. The Arrow system became operational in 2017 and has been deployed to counter Syrian missiles.

The Arrow weapon system, which intercepts missiles outside of the atmosphere, is part of Israel's layered defense system that includes Iron Dome, David's Sling and Arrow-2 systems. The multi-layered system is meant to defend against short- and mid-range rockets coming from Gaza and Lebanon.

"The Arrow-3 interceptor successfully demonstrated an engagement capability against the exo-atmospheric target during the test," according to a July 28 MDA statement. "Preliminary analysis indicates that test objectives were successfully achieved."

MDA Director Vice Adm. Jon Hill said, "These successful tests mark a major milestone in the development of the Arrow Weapon System. This unique success in Alaska provides confidence in future Israeli capabilities to defeat the developing threats in the region.

Hill reaffirmed the U.S. commitment to helping the Israel government to upgrade its national missile defense capability to defend against emerging threats.

A Raytheon-made AN-TPY2 radar participated in the test. It is not part of the Israeli missile defense architecture.

The tests mark a culmination of ten "challenging" years of development, the IMDO director, Moshe Patel, said in the statement.

"The fact that these tests were conducted in Alaska, tens of thousands of kilometers away from Israel, is another significant achievement that demonstrates the operational capabilities of the Arrow 3 system to successfully face any threat," he said.

Israel announced in January that it had successfully tested Arrow-3 against long-range ballistic missile threats following previous tests aimed at verifying a variety of capabilities such as the missile's ability to differentiate between decoys and threat targets.

<https://www.defensenews.com/pentagon/2019/07/28/us-israels-arrow-3-missile-put-to-the-test-in-alaska/>

[Return to top](#)

C4ISRNET (Vienna, Va.)

How a New Missile Warning System Benefits Industry

By Nathan Strout

July 26, 2019

Sales for an early missile warning satellite system are driving profits at both Lockheed Martin and Raytheon, according to second quarter earnings calls.

The Air Force's Next Generation Overhead Persistent Infrared system will consist of five satellites providing advanced warnings of missile attacks on the United States, its deployed forces and its allies. OPIR will replace the Space Based Infrared System to provide better missile warning capabilities and increased survivability.

In August 2018, the Air Force awarded Lockheed Martin a \$2.9 billion contract to build three geosynchronous OPIR satellites. Northrop Grumman was selected to build two OPIR satellites covering the polar regions, and in June 2018 the Air Force awarded them a \$47 million undefined contract for requirements analysis and risk reduction efforts on that program.

Second quarter sales in Lockheed Martin's space segment increased from \$2.4 billion in 2018 to nearly \$2.7 billion in 2019, an increase of 11 percent, with operating profits increasing from \$274 million to \$288 million. In a press release, the company claims that OPIR, GPS III and other government satellite systems drove most of that increase.

"We got the OPIR contract late last year, CSC, the Canadian Surface Combatant, and GPS III in late last year," explained Lockheed Martin Executive Vice President and Chief Financial Officer Ken Possenriede in an July 23 earnings call. "[With those programs] the agency has talked about 'go fast,' We are taking them by their word and we are going fast and we've accelerated sales."

While Lockheed Martin is the primary contractor for the GEO OPIR satellites, the company has subcontracted with Raytheon and a Northrop Grumman/Ball Aerospace team for work on the payload.

While Ball Aerospace hasn't released their quarterly earnings yet, Raytheon announced it benefited from the new satellite system. According to the company, OPIR helped drive net sales from \$1.6 billion in the second quarter of 2018 up to \$1.8 billion in the second quarter of 2019 along with increased sales on classified programs and an international tactical radar systems program. That's an increase of 13 percent.

Northrop Grumman representatives did not mention OPIR or other Department of Defense satellite programs by name in its second quarter earnings announcement. A June 30 press release does note that "sensors and processing sales increased principally due to higher volume on infrared countermeasures, airborne radar and restricted programs."

Meanwhile, the president continues to battle with Congress over funding for the OPIR program. The House has voted to fund the program \$376.4 million less than the Pentagon had asked for. The White House has fought back against that decision, arguing that underfunding the program in the near term will cost hundreds of millions of dollars more in the long term and delay the program by years. The Senate voted to fully fund the Pentagon's OPIR request. The fate of the funding will be sorted out in a conference committee.

<https://www.c4isrnet.com/battlefield-tech/space/2019/07/25/how-a-new-missile-warning-system-benefits-industry/>

[Return to top](#)

US ARMS CONTROL

BBC (London, U.K.)

Talks Held in Vienna to Salvage Iran Nuclear Deal

Author Not Attributed

July 28, 2019

After meeting officials from Britain, France, Germany, Russia and China in Vienna, a senior Iranian official said the atmosphere had been "constructive".

Tensions have soared since the United States withdrew from the 2015 accord last year and reimposed sanctions.

In recent weeks, Iran and Britain have seized a tanker each - putting further pressure on the 2015 accord.

Iran has also admitted breaching restrictions on its production of enriched uranium, used to make reactor fuel but also potentially nuclear bombs.

What was hoped for from the meeting?

The aim of the emergency talks was to ease recent tensions, and keep the 2015 agreement, officially known as the Joint Comprehensive Plan of Action (JCPOA), alive.

Earlier this month, the UK, French and German leaders had issued a joint statement saying they were "deeply troubled" by events in the Gulf, and said it was "time to act responsibly and seek a path to stop the escalation of tensions and resume dialogue".

Arriving at the meeting, Iran's Deputy Foreign Minister Abbas Araghchi said he considered the seizing of its oil tanker in breach of the JCPOA, and Iran also described as "provocative" British proposals for a European-led mission to escort tankers through the Strait of Hormuz, a vital international shipping route.

Mr Araghchi said after the meeting: "The atmosphere was constructive. Discussions were good. I cannot say that we resolved everything, I can say there are lots of commitments."

China's representative Fu Cong said all parties had "expressed their commitment to safeguard the JCPOA and... expressed their strong opposition against the US unilateral imposition of sanctions."

What do we know of tensions?

Tensions between the UK and Iran rose earlier this month after British forces seized the Iranian tanker, Grace 1, off Gibraltar. London alleged it was carrying oil to Syria in breach of EU sanctions, a claim denied by Iran.

Several days later the British-flagged Stena Impero was impounded by Iran, which said it had been "violating international maritime rules".

Britain sent a second warship on Sunday to escort its ships sailing through the Strait of Hormuz.

Recent incidents have also included:

- US claims that an Iranian drone was destroyed after coming close to the USS Boxer aircraft carrier earlier this month

- A US threat to carry out air strikes after Iran shot down a US drone in June
- Explosions that damaged two tankers near the Strait of Hormuz, also in June
- Blasts that hit four tankers in the UAE's territorial waters in May

Why is the deal in trouble?

In 2018, President Donald Trump said he would unilaterally withdraw the US from the agreement which was signed by his predecessor Barack Obama.

The US then reinstated sanctions on Iran, as well as countries and companies do business with Iran.

The other parties criticised Mr Trump's decision and said they remained fully committed to the deal.

Earlier this month, the International Atomic Energy Agency confirmed that Iran had breached the deal's cap on stockpiling of low-enriched uranium.

Iran said it was responding to sanctions reinstated by the US after Mr Trump abandoned the deal. It has also confirmed it will break another of the limits imposed by the deal.

<https://www.bbc.co.uk/news/world-middle-east-49145174>

[Return to top](#)

The Hill (Washington, D.C.)

Trump Says He's Not Concerned about North Korean Missile Tests

By Brett Samuels

July 26, 2019

President Trump on Friday said he's not concerned by North Korea's latest missile test, repeatedly downplaying the projectiles as "short-range" and touting his relationship with Kim Jong Un.

"They're short-range missiles and my relationship is very good with Chairman Kim," Trump told reporters in the Oval Office. "And we'll see what happens, but they are short-range missiles and many people have those missiles."

When a reporter noted that he appeared unbothered by the missile launches, Trump responded "no, not at all."

North Korea issued a statement early Friday saying that the missile test, which reportedly involved a new type of projectile, was intended as a warning to South Korea and its president, Moon Jae-in.

Trump brushed aside the message, noting it did not include a threat toward the United States.

"He didn't say a warning to the United States. I can tell you that," he said. "But they have their disputes. The two of them have their disputes. ... But they are short-range missiles and very standard missiles."

Trump has met face-to-face with Kim on three occasions in the past 13 months in an effort to denuclearize the Korean peninsula. He became the first sitting U.S. president to set foot in the hermit nation of North Korea last month.

While the president has spoken fondly of the North Korean leader, the meetings have yielded no concrete commitments to dismantling the country's nuclear arsenal, and North Korea has conducted multiple missile launches in recent weeks.

<https://thehill.com/homenews/administration/454956-trump-says-hes-not-concerned-about-north-korean-missile-tests>

[Return to top](#)

COMMENTARY

The Hill (Washington, D.C.)

Minerals Essential for National Security

By J. Winston Porter

July 30, 2019

America is increasingly dependent on imported uranium and other minerals that are essential for our national security.

The U.S. relies on imports for 93 percent of its uranium needs, and dependence on foreign nuclear-fuel is expected to reach almost 99 percent by the end of this year. Although the U.S. has some of the largest and highest-grade uranium deposits in the world, imported uranium is still less expensive.

Much of our uranium comes from Russia and other former Soviet Union states, whose state-owned companies are flooding the global market and driving free-market companies out of business.

A crisis may not be imminent, but the long-term implications for weapons systems central to national defense, including the Navy's fleet of nuclear-powered aircraft carriers and submarines, are serious.

Absent a change in direction, U.S. dependence on imported uranium may create a growing national security threat. And it will cause serious trouble for key sectors of our economy, if something isn't done soon to boost domestic uranium production.

Nuclear power producers, who generate the largest share of the nation's emissions-free power, are also concerned about the collapse of the nation's uranium supply chain. The damage from the loss of this key industry would extend to radionuclides needed for medical diagnosis and many other technologies.

Given the risk of a spike in the price of uranium imports or an actual embargo aimed at the U.S., developing a government policy to counter the threat to our national security and economic well-being is long overdue. President Trump recently announced a group that will draw up recommendations for reviving and expanding U.S. nuclear-fuel production.

But beyond that, we need policies that will reduce America's reliance on foreign countries for many other important minerals and help lay the groundwork for a revival of domestic mining.

Rare earth minerals are another good example. There are some 17 rare earth elements such as lanthanum, cerium, praseodymium, neodymium, promethium and samarium. These little-known minerals are vital components of weapons systems and in multiple commercial products ranging from batteries for electric vehicles and superconductors to laptops, and smartphones. Without rare earths, the technology revolution might grind to a standstill.

China dominates the world's rare earth supply and supplies 80 percent of the rare earths imported by the U.S. What's more, China has threatened to use rare earth exports as leverage in the trade wars with the U.S.

But like uranium, rare earths are only part of the story. Although the U.S. imports minerals and metals from around the world, China is the primary supplier of about 26 of the 48 minerals that our country is import-dependent.

China also controls many of the materials like cobalt (used in batteries for electric vehicles) that are critical to our country's economy. In industrial competition or in a trade war, where leverage matters, this gives China a big advantage.

While China has made minerals production a strategic priority, we've done the opposite. Mining in the U.S. has been pushed to the margins. As recently as the early 1990s, the U.S. was the world's largest producer of rare earths. Today, we have just one rare earth mine remaining and it must ship its ore to China for processing.

For that matter, there are only two operating uranium mines left in the U.S., whereas there had once been dozens of mines as recently as 1980 when America was the world's leading uranium producer.

The U.S. mining industry, however, is saddled with regulations and a permitting process so burdensome that many of the minerals and metals that are essential for our economy and national security must be imported from overseas.

Here in the U.S., it typically takes seven to 10 years for a mining company to obtain a federal mining permit, whereas it takes two to three years in other countries with comparable environmental standards. Proposed legislation to update and improve the permitting and regulatory process has been stalled in Congress for years.

Now is the time for decisive action to encourage development of domestic mineral supplies. The race is on to secure the supply chains for the technologies of tomorrow — our national security and economic well-being are at stake.

J. Winston Porter, Ph.D., is a former assistant administrator of the EPA. He is an energy and environmental consultant based in Atlanta.

<https://thehill.com/opinion/energy-environment/455217-minerals-essential-for-national-security>

[Return to top](#)

Breaking Defense (Washington, D.C.)

Compete or Not, But Go Full Steam Ahead on GBSD

By Peter Huessy

July 26, 2019

Only one company is left in the running to build the next generation of nuclear Intercontinental Ballistic Missiles leading to the natural question: should the Air Force change the proposed contract to better accommodate Boeing's concerns to ensure more fair competition or allow Northrop Grumman to go ahead?

If the current Ground-based Strategic Deterrent program's requirements can be met through amending the RFP without delaying the program, then we can go in that direction. Otherwise, as there is precedent for going with a single bidder, we should proceed with the GBSD research and development contract. There are in place considerable controls and requirements that assure a cost-effective ICBM will be built and deployed, protecting the American people for decades to come.

How did we get here? It's simple, really. There were three competitors: Boeing, Lockheed Martin and Northrop Grumman. The Air Force whittled that down to Boeing and Northrop. Then Boeing,

clearly worried by Northrop's acquisition last year of Orbital ATK, which builds solid rocket motors and is reportedly still a Boeing supplier, dropped out of the program. So, we are left with what Boeing sees as an uncompetitive program.

We have to understand as Gen. John Hyten, head of Strategic Command, has said, the country's ability to extend the current 49-year life of the existing Minuteman III land-based missile is limited. For every year we delay building the new more capable system, we raise the costs of sustaining the existing system and risk not having available the future deterrent capability we need. And senior defense leaders such as Ellen Lord say we must have a new system by 2028.

This is not a trivial concern. President Kennedy explained after the Cuban missile crisis that the Minuteman I was, in the president's words "My ace in the hole" that kept the Cuban Missile Crisis from escalating out of control. We want a credible "ace in the hole" as we face a highly uncertain and risky future.

Work I have done at the Mitchell Institute looked at the history of efforts to modernize our nuclear deterrent. During the Eisenhower, Kennedy, Reagan and Bush 41 administrations, most of the first two Triads were built, with 13 to 15 years between each modernization phase. If America meets the current plan for nuclear upgrades and improvements, required simply to keep a nuclear deterrent in the field, there will be 47 years between the last modernized effort in the Reagan administration and the projected nuclear enterprise effort now planned for 2029-2042. We cannot kick the nuclear can down the budget road anymore—we have run out of road.

We have already taken what retired Gen. Garret Harencak described as a nuclear procurement holiday since the end of the Cold War. Although we have been able to continuously upgrade the venerable B-52 for decades, the Minuteman III's cannot have their accuracy and penetration capabilities sufficiently upgraded to meet requirements as laid out by both the 2010 and 2018 Nuclear Posture Reviews.

Our enemies however have not taken any holiday. After the end of the Cold War, Russia soon embarked on the most extensive nuclear modernization effort in its history. Multiple new intercontinental ballistic missiles, submarines, cruise missiles and bombers are currently being produced, nearly two-dozen nuclear systems. This includes some six new exotic nuclear technologies, systems that Russia claims are not controlled by the 2010 New Start treaty, but which have strategic nuclear capabilities. We thus face a very formidable nuclear armed adversary that makes it imperative we maintain the strongest possible deterrent ourselves.

As the Mitchell Institute's director of deterrent studies, I am now studying this relative strategic balance between Russia and the United States in some detail, and from a perspective quite different than the common "global zero" disarmament point of view of SIPRI or the FAS, for example.

Topol-M Russian ICBM

What I have found is that Russia has the current capability to put into the field over 2,500 strategic long-range warheads, and, by the middle of the next decade, could easily increase that number in a breakout scenario by upwards of 4,500 long-range nuclear warheads.

When added to what the Defense Intelligence Agency says is an arsenal of at least 2,000 short-range theater nuclear missiles, Russia has roughly a potential 4-1 numerical advantage in deployed and fielded nuclear warheads over the United States.

Russia can produce no less than 1,000 new warheads a year, while the US cannot produce even one. Yes, the US has a reserve stockpile of around 2,000 warheads, but these warheads need further work, including tritium gas, and cannot be quickly added to our arsenal.

Uploading more nuclear warheads onto current missiles takes time as well. For example, our Minuteman III can carry three warheads, not just the one currently in place. Roughly three missiles per ICBM wing or nine per month can be upgraded, meaning it would take more than three years to upload all 400 Minuteman missiles now deployed.

Each submarine could also be uploaded by between 30 to 50 warheads, depending on whether it is the Ohio or Columbia class submarine, with 16 or 20 missiles. This would give the US an upload surge capability of 1,400 fast-flying missile warheads over a number of years, but that would still leave us lagging the existing Russian surge capability of at least twice our potential upload of deployed strategic missile warheads.

Failure to build the next ICBM in a timely manner risks creating a highly unstable strategic balance where a new window of vulnerability opens up. GBSD is cost-effective, very stabilizing, and critical to our security.

<https://breakingdefense.com/2019/07/compete-or-not-but-go-full-steam-ahead-on-gbsd/>

[Return to top](#)

Defense One (Washington, D.C.)

If New START Dies, These Questions Will Need Answers

By Vincent Manzo and Madison Estes

July 28, 2019

The Trump administration has articulated an ambitious new vision for nuclear arms control, one that includes China and seeks to limit more types of Russian systems. This vision appears to have little room for the New START agreement, which helped to cap U.S. and Russian nuclear arsenals and which is due to expire in 2021. And yet there is little in the public record to indicate how the administration would deal with various problems that would surface if New START is left to die.

In June, eight leading Democrats on national security sent a letter to President Trump asking seven questions about his arms control agenda and how it might be brought to fruition. Several of those questions remain unanswered — at least by the Trump administration. But we can offer some answers, thanks to a recently released CNA study we conducted looking at potential risks and options after New START:

“If Russia were to increase the size of its strategic nuclear arsenal, how would the United States respond?”

Unlike in 2009 and 2010, when New START negotiations were underway, Russia is vigorously modernizing its nuclear arsenal. If the treaty expires, Russia could in short order exceed its limits by hundreds of deployed warheads. The United States would then have two options.

First, it could follow Russia past New START’s limits on deployed warheads and delivery vehicles; for example, by re-adding missiles and warheads to its Ohio-class ballistic missile submarines. But this kind of nuclear re-arming would take time, cost money, and could fuel the global perception that the United States and Russia are entering a dangerous new arms race.

Or the United States could stay at New START levels regardless of Russian increases. The current arsenal, which combines ICBMs, sub-launched ballistic missiles, and bombers armed with gravity bombs and cruise missiles, would remain sufficient to deter limited and large-scale nuclear attacks, assuming the current modernization program of record remains intact. For example, even if Russia maxed out its upload capacity and launched a surprise attack, it would exhaust most of its deployed

forces on U.S. ICBMs, thus leaving it with no confidence it could deter the United States from responding with the roughly 450 warheads it would have remaining on the Ohio submarines at sea.

But this would break with the longstanding U.S. policy of maintaining rough numeric parity with deployed Russian strategic warheads. Given that the Trump administration's central critique of New START is that it does not help narrow the large asymmetry between U.S. and Russian non-strategic nuclear weapons, it seems unlikely that the administration would countenance an asymmetry at the strategic level.

Both of these options have pros and cons. The Trump administration clearly hopes to avoid a scenario where it would have to choose between them, as its goal is to replace New START with a better treaty. Yet February 2021 is only eighteen months away, and it is highly unlikely the administration will achieve its preferred trilateral agreement before then. Thus, unless the administration extends New START, it must prepare to face a decision about how to respond to an increase in Russia strategic forces.

“What is the assessment regarding the potential loss of insights into Russia's nuclear forces if New START expires?”

Without New START, the U.S. intelligence community would have less insight into Russian strategic nuclear forces. The agreement's verification regime provides U.S. analysts with a granular understanding of Russian forces through data exchanges, notifications, and on-site inspections. For example, the treaty requires Russia to notify the United States 48 hours before any new ballistic missiles leave the production facility, then tell the United States where it stations the missiles and whether they are loaded into launchers. If Russia pulls older missiles from deployment and eliminates them, it must notify the United States and follow a verifiable procedure for functionally disabling them. Similar to data gathered through consumer purchases and social media, each individual piece of information is only of limited value, but when combined they create a deep window into Russian nuclear operations.

The United States will certainly have some ability to acquire this information through its independent means of intelligence gathering, but at a higher cost and with less certainty because Russia will not be telling the U.S. intelligence community where and when to direct its national technical means, such as satellites, and what activity it will be observing.

And there is some information the United States receives from Russia through New START that it simply will not be able to acquire through other means. For example, twice a year Russia provides the United States with the total number of deployed strategic warheads, their breakdown across deployed ICBMs and SLBMs, and how many warheads are deployed on delivery vehicles at each ICBM and SLBM base.

“What resources will be diverted by the U.S. Intelligence Community to fulfill this mission?”

Without the data provided through New START, demand for analysis on Russian strategic nuclear forces will increase. To fill this demand, the United States would need to divert both national technical means and the analysts who make sense of raw data from other priorities, such as Chinese, North Korean, and Iranian ballistic missile programs.

Indeed, the treaty was signed in part to avoid having to make such tradeoffs. In 2010, Gen. Kevin Chilton, the commander of U.S. Strategic Command, said that without New START, the United States would “be required increasingly to focus low density/high demand intelligence collection and analysis assets on Russian nuclear forces.”

“What would be the effect on our alliances around the world, especially NATO, of letting the Treaty lapse?”

Nuclear arms control with Russia also helps to unite U.S. allies in NATO around a common security strategy. According to Robert Bell, the former U.S. defense advisor to NATO, the United States' continued commitment to arms control was essential for garnering a consensus within the alliance at the 2016 Warsaw Summit and the 2018 Brussels Summit.

While NATO allies ultimately supported U.S. withdrawal from the Intermediate-Range Nuclear Forces Treaty, they are unlikely to rally around the United States if it allows New START to expire despite Russian compliance with the treaty. What is more, if U.S. allies perceive the United States as failing to put forward a serious nuclear risk-reduction strategy, sustaining NATO solidarity in the future may become more difficult. Some NATO members have domestic constituencies who are skeptical of NATO's nuclear burden-sharing mission. These policy preferences may gain greater traction in a post-New START world, especially if both the United States and Russia are increasing their deployed nuclear forces and the end of U.S.-Russian arms control increases discord within the already strained Nuclear Non-Proliferation Treaty.

Recommendations

The Trump administration is correct that United States must broaden its approach to arms control. Verifiable limits on strategic nuclear forces remain valuable, but the spectrum of weapons and actors that could trigger arms competitions and nuclear conflict has expanded beyond the narrow U.S.-Russian arms control framework. This is why the Trump administration should extend New START. Extension would preserve verifiable limits on Russian strategic nuclear forces while the United States develops new proposals tailored to 21st-century nuclear dangers.

Moreover, the administration should act promptly. Leaving New START extension unresolved into next year is likely to reduce the administration's ability to achieve its arms control objectives. The closer we get to February 2021, the more attention U.S. defense, intelligence, and diplomatic officials will likely devote to figuring out how to manage the challenges that would emerge without New START — and the less they will have to conceptualize and negotiate new and plausible arms control arrangements for the emerging strategic landscape.

Vince Manzo is a nuclear policy analyst. The views expressed here are his own. He is the author of "Nuclear Arms Control without a Treaty? Risks and Options After New START." FULL BIO

Madison Estes is an analyst at CNA. The views expressed in her articles are her own.

<https://www.defenseone.com/ideas/2019/07/if-new-start-dies-these-questions-will-need-answers/158744/?oref=d-river>

[Return to top](#)

ABOUT THE USAF CSDS

The USAF Counterproliferation Center (CPC) was established in 1998 at the direction of the Chief of Staff of the Air Force. Located at Maxwell AFB, this Center capitalizes on the resident expertise of Air University — while extending its reach far beyond — and influences a wide audience of leaders and policy makers. A memorandum of agreement between the Air Staff's Director for Nuclear and Counterproliferation (then AF/XON) and Air War College commandant established the initial personnel and responsibilities of the Center. This included integrating counterproliferation awareness into the curriculum and ongoing research at the Air University; establishing an information repository to promote research on counterproliferation and nonproliferation issues; and directing research on the various topics associated with counterproliferation and nonproliferation.

In 2008, the Secretary of Defense's Task Force on Nuclear Weapons Management recommended "Air Force personnel connected to the nuclear mission be required to take a professional military education (PME) course on national, defense, and Air Force concepts for deterrence and defense." This led to the addition of three teaching positions to the CPC in 2011 to enhance nuclear PME efforts. At the same time, the Air Force Nuclear Weapons Center, in coordination with the AF/A10 and Air Force Global Strike Command, established a series of courses at Kirtland AFB to provide professional continuing education (PCE) through the careers of those Air Force personnel working in or supporting the nuclear enterprise. This mission was transferred to the CPC in 2012, broadening its mandate to providing education and research on not just countering WMD but also nuclear operations issues. In April 2016, the nuclear PCE courses were transferred from the Air War College to the U.S. Air Force Institute for Technology.

In February 2014, the Center's name was changed to the Center for Unconventional Weapons Studies (CUWS) to reflect its broad coverage of unconventional weapons issues, both offensive and defensive, across the six joint operating concepts (deterrence operations, cooperative security, major combat operations, irregular warfare, stability operations, and homeland security). The term "unconventional weapons," currently defined as nuclear, biological, and chemical weapons, also includes the improvised use of chemical, biological, and radiological hazards. In May 2018, the name changed again to the Center for Strategic Deterrence Studies (CSDS) in recognition of senior Air Force interest in focusing on this vital national security topic.

The Center's military insignia displays the symbols of nuclear, biological, and chemical hazards. The arrows above the hazards represent the four aspects of counterproliferation — counterforce, active defense, passive defense, and consequence management. The Latin inscription "Armis Bella Venenis Geri" stands for "weapons of war involving poisons."

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