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Featured Item: *“Options for the Ground-Based Leg of the Nuclear Triad”*. Written by Todd Harrison, and published by the Center for Strategic and International Studies; September, 21 2017

<https://www.csis.org/analysis/options-ground-based-leg-nuclear-triad>

The Air Force is beginning a major new acquisition program to replace the ground-based leg of the nuclear triad. This program, known as the Ground Based Strategic Deterrent (GBSD), will be one of the Air Force’s largest acquisition programs throughout the 2020s and could compete for funding with other acquisition priorities, such as the F-35 Joint Strike Fighter, B-21 bomber, and KC-46A aerial refueling tanker. The new missiles acquired under the GBSD program are projected to remain in the inventory through the 2070s and serve as a core component of the U.S. nuclear arsenal for a generation. The future of the ground-based leg of the nuclear triad is one of the main issues the Trump administration should consider in the Nuclear Posture Review (NPR) currently being conducted. More specifically, the NPR should address the need for a new intercontinental ballistic missile (ICBM), the timing of the program, and the role of ICBMs in U.S. nuclear deterrence.

The purpose of this report is to provide an independent assessment of the options available for the ground-based leg of the nuclear triad. The first chapter provides background on the role of the ground-based leg of the triad in the U.S. nuclear arsenal. It looks at how the role of ICBMs has evolved over time, including reductions in the ICBM force through treaties and unilateral actions. It also explores how the mix of nuclear delivery systems in the U.S. arsenal has shifted and details the current composition of the U.S. nuclear force. The second chapter examines the impetus for the GBSD program and the fiscal context in which it is planned. It reviews the Air Force’s analysis of alternatives for GBSD and explains the differences between competing cost estimates for the program. The third chapter evaluates options to modernize or extend the life of the ground-based leg of the triad, and the final chapter offers conclusions and key questions for policymakers to consider. This study does not recommend a particular option; instead, it offers comparisons and insights to help policymakers understand the full range of options available and their consequences.

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US NUCLEAR WEAPONS

The Japan Times (Tokyo, Japan)

Use of small tactical nuclear weapons proposed in U.S. policy review

Author Not Attributed

October 4, 2017

The development and deployment of small tactical nuclear weapons have been proposed during an ongoing review of U.S. nuclear policy by the Trump administration, a congressional source has said.

Adoption of the proposal would mark a major departure from the Obama administration, which sought “a world without nuclear weapons.”

Tactical nuclear weapons of several kilotons are considered usable because their destructive power much lower than that of conventional nuclear weapons. But it remains uncertain whether Washington will employ such an option, given strong opposition within the U.S. government, the source said.

The proposal has emerged at a time when the United States is struggling to deal with the growing nuclear threat from North Korea.

President Donald Trump ordered the crafting of the Nuclear Posture Review in January, the first since one under the Obama administration in 2010. The U.S. government is planning to complete the review by the end of this year, taking new security conditions into account.

Discussions on the NPR are led by the Defense Department and the Energy Department. According to the source, some have voiced support for the development and deployment of small tactical nuclear weapons in view of North Korea as well as Russia, which has unveiled its policy to strengthen tactical nuclear forces.

With guided small tactical nuclear weapons, the United States could destroy nuclear facilities in North Korea while curbing radiation damage, the source added.

On the introduction of small tactical nuclear weapons, a U.S. official said there are a number of options to build a flexible nuclear posture.

<https://www.japantimes.co.jp/news/2017/10/04/asia-pacific/use-small-tactical-nuclear-weapons-proposed-u-s-policy-review/#.WdWZcmSnFTa>

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The Republic (Columbus, IN)

Crews start injecting grout into collapsed Hanford tunnel

By Nicholas Geranios

October 4, 2017

Workers at the Hanford Nuclear Reservation have started injecting grout into a partially collapsed tunnel that contains radioactive wastes left over from the production of nuclear weapons, the U.S. Department of Energy said Wednesday.

The grout is intended to improve the stability of the 360-foot-long (110 meters) tube, which dates to 1956, and help prevent any radioactivity from escaping into the environment.

It will take an estimated 650 truckloads of grout to fill the tunnel adjacent to the closed Plutonium Uranium Extraction Plant, which produced most of the plutonium for the nation's nuclear arsenal, the agency said. The complicated work should be completed by the end of the year.

"There is no question about the difficulty of the work, but we will work safely and methodically to fill up the tunnel," said Doug Shoop, manager of the agency's Richland Operations Office.

The roof of the tunnel, which was sealed in 1965, partially collapsed on May 9, forcing about 3,000 workers to shelter in place for several hours.

There were no injuries.

Hanford, which is about 170 miles (273 kilometers) southwest of Seattle, was built by the Manhattan Project during World War II as the U.S. raced to beat Germany to create an atomic bomb. Hanford made the plutonium for the atomic bomb dropped on Nagasaki, Japan, and went on to make about 60 percent of the nation's plutonium during the Cold War.

The site now contains the nation's greatest volume of radioactive defense wastes. Cleanup of the site is expected to last until 2060 and cost \$100 billion.

The grout will be injected into the tunnel at night. It is engineered to flow easily and will cover the contents, including eight contaminated railroad cars that carry waste.

The tunnel being filled with grout is one of two near the PUREX plant that contain contaminated rail cars and other radioactive waste.

The department concluded earlier this year that there is a high risk that the second, much larger, tunnel could also collapse.

The Energy Department has said that the two sealed tunnels "do not meet current structural codes and standards."

The larger tunnel was built of metal and concrete in 1964. It is approximately 1,700 feet (510 meters) long and is covered with eight feet (2.5 meters) of soil to prevent radiation from escaping. Inside are 28 flat-bed rail cars containing nuclear waste, including giant storage vessels and other large equipment from plutonium production. That tunnel was sealed in 1996 and has not been entered since.

<http://www.therepublic.com/2017/10/04/us-nuclear-waste-accident/>

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The Warzone (Tampa, FL)

USAF Replaces Bulky Tape Cartridges For Loading Launch Codes Into ICBMs

By Joseph Trevithick

October 3, 2017

The new system is less than half the weight of the older equipment and shifts data onto the missiles much faster.

The U.S. Air Force still is pushing ahead with plans to modernize its intercontinental ballistic missile (ICBM) force as the Pentagon continues to work through its latest nuclear posture review, which will likely decide the future of that entire leg of America's "Nuclear Triad." In the meantime, the service is still conducting smaller more immediate projects to update the dated infrastructure supporting this

deterrent arm, including replacing huge tape-based data systems that personnel used to reprogram missile launch codes and other data.

On Oct. 2, 2017, the Air Force reported that the 91st Missile Wing at Minot Air Force Base in North Dakota, one of three ICBM wings in the service, had begun using a new information transfer system to upload critical mission information into each individual LGM-30G Minuteman III ICBM. The first of these new Data Transfer Units (DTU) became available in June 2017 as part of a \$68 million upgrade program.

“The DTU loads the Missile Guidance Set, which is the brain of the Minuteman III, with sensitive cryptographic data and other information the missile needs in order to function,” U.S. Air Force Captain Kevin Drumm, the codes operations chief at the 91st Operation Support Squadron, explained to the service’s reporters. “The DTU has increased productivity and shortened the time required to conduct coding operations.”

Shortening the time is putting it mildly. Before the upgraded units arrived, the 91st was using a system called the Launch Facility Load Cartridge to program tape memory cartridges with all the necessary data. According to Drumm, it would take 45 minutes to build the data set, which personnel would then spend another 30 minutes loading into a single missile.

On top of that, the cartridge programming equipment was so old that it could only fit enough information for one missile on a single tape cartridge tape unit, which weighed approximately 45 pounds each. The information for each missile is unique for security purposes, so the wing’s code team would need to run through the process 50 times and lug all of the cassettes out to the dispersed launch facilities.

Instead, the new system can build a missile’s full mission data package in 30 minutes and load it into the weapon in less than 10 minutes. Each Data Transfer Unit can hold the information for 12 missiles and weighs just 20 pounds. The Air Force did not say whether the new system is still tape based, which remains a popular high-density data storage format.

All of this saves valuable time and effort during the annual change of codes across the Air Force’s ICBM arsenal, nicknamed Operation Olympic Step, as well as whenever the service might need to update other parts of the missile’s software. U.S. Air Force General Robin Rand, head of Air Force Global Strike Command, which oversees all of the service’s strategic nuclear elements, specifically highlighted the long work hours for missileers supporting the ICBM mission during a panel discussion at the Air Force Association’s annual Air, Space, and Cyber Conference in September 2017.

“They’ll [the missileers] come in about seven o’clock, these younger lieutenants and captains most of them, and they’ll brief up and they’ll get their classified material and they’ll hit the road,” he explained. “They’ll drive as far as three or four hours to get to their ‘office’ and they’ll assume their alert. And they’ll go down on 24-hour alert and they’ll come up and drive those three hours back and then they’ll debrief.”

Individuals will perform these 30-plus hour work “days” between seven and eight times each month, according to General Rand. Support personnel must drive the same distances to get the new code packages out to each of the missiles. Any time savings can be important both to efficient operating and unit morale, the latter of which has become a particularly significant issue for what some have declared a “dead-end career.”

But when it comes to the technology in use, the previous tape memory arrangement was indicative of the generally archaic infrastructure that supports the land-based leg of the Nuclear Triad. In May 2016, the Government Accountability Office (GAO) issued a report regarding the increasing age of computers

across the federal government, mentioning the age of systems at ICBM launch control facilities, among others.

“The Strategic Automated Command and Control System ... coordinates the operational functions of the United States’ nuclear forces, such as intercontinental ballistic missiles, nuclear bombers, and tanker support aircrafts, among others,” the report explained. “the system is still running on an IBM Series/1 Computer, which is a 1970s computing system, and written in assembly language code.”

Introduced in 1976, the Series/1 was a so-called “minicomputer,” smaller than the room-sized mainframes of the day, which IBM made to order in configurations ranging from \$10,000 to \$100,000. The assembly code language dates to 1949.

In addition, the Air Force’s strategic control computers run off programs on eight-inch floppy disks. In March 2016, the Department of Defense had begun another \$60 million modernization effort in light of the increasing age of the hardware.

“Replacement parts for the system are difficult to find because they are now obsolete,” GAO noted. “There is a plan underway to replace the floppy disks with secure digital cards.”

At the time, U.S. Army Lieutenant Colonel Valerie Henderson, a Pentagon spokesperson, had a blunt response for media outlets asking about why the U.S. military continued to use the long out of production computers. “This system remains in use because, in short, it still works,” she said

Experts pointed out that, though dated, the Series/1s and its old disks might actually present a serious challenge for opponents looking to launch cyber attacks on the launch facilities. Disconnected from the internet and without a more common way of directly inserting malicious software into the system made them more secure in many ways.

“I’ll tell you, those older systems provide us some – I will say huge safety when it comes to some cyber issues that we currently have in the world,” U.S. Air Force Lieutenant General Jack Weinstein, then a major general in charge of Twentieth Air Force, the service’s top ICBM command, had told CBS’ 60 Minutes in 2014. “A few years ago we did a complete analysis of our entire network. Cyber engineers found out that the system is extremely safe and extremely secure on the way it’s developed.”

Though many of the specific details remain classified, Boeing and Northrop Grumman, the two contractors vying for the Air Force’s ICBM replacement deal, known as the Ground Based Strategic Deterrent (GBSD) program, have each indicated cyber security improvements are one of the many things they aim to include in their new missiles. They have also indicated plans to improve the modularity of the weapons, to allow personnel to perform upgrades and install updates much faster.

The new Data Transfer Units and any new hardware and software for a future ICBM will have to take cyber attacks, among other threats, into consideration. As we at The War Zone have noted before, as the U.S. military has become more computerized, the dangers to those networks will only become more pronounced. Even if the Series/1 consoles get replaced, the Air Force may decide it makes sense to stick to transferring data to and from the missiles themselves on magnetic tape.

So don’t be surprised if the new GBSDs, when and if they reach the Air Force’s missile units, still rely on mission software packages loaded up from a tape memory cartridge.

<http://www.thedrive.com/the-war-zone/14828/usaf-replaces-bulky-tape-cartridges-for-loading-launch-codes-into-icbms>

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DefenseNews (Vienna, VA)

Lockheed, Rockwell to develop airborne C2 system for launching ICBMs

By Valerie Insinna

October 4, 2017

Lockheed Martin and Rockwell Collins have been awarded contracts to continue development of an airborne command-and-control system that makes it possible for the U.S. Air Force to launch an intercontinental ballistic missile even if launch control centers on the ground are destroyed.

On Tuesday, the Air Force announced it had given Lockheed an \$81 million contract and Rockwell a \$76 million contract for the technology maturation and risk reduction phase of the Airborne Launch Control System Replacement. That program, also known as ALCS-R, will support ICBM operations until 2075, meaning it will work with both the current Minuteman III system and its eventual replacement, the Ground Based Strategic Deterrent, which will come online in the late 2020s.

The Air Force fielded an ALCS capability in the late 1960s to make moot the Soviet Union's ability to decapitate the ICBM force by destroying the United States' command-and-control, or C2, facilities. The thought process was thus: Even if an attack were to wipe out the ground-based launch-control centers, those ICBMs would remain ready to launch in many circumstances, and an aircraft equipped with the ALCS system could fly overhead and give the command.

Today, the U.S. military operates 16 E-6B aircraft equipped with the ALCS system, as well as one plane used for integration and lab testing. The E-6Bs are owned and flown by the Navy, while an on-board Air Force crew is tasked with providing a mobile C2 capability for the ICBM enterprise.

During ALCS-R, the Air Force intends to replace all of the airborne mission equipment on the E-6Bs as well as ground-based radios in 450 launch-control centers, which haven't been updated since the 1960s, said an Air Force official with knowledge of the program.

According to a May 2015 request for information, most of the legacy ALCS equipment dates from the 1980s and was developed for the EC-135 aircraft that has since been retired. It also encrypts information using a U.S. National Security Agency system that will soon become obsolete.

"While mission and platform changes have occurred, the ALCS has not kept pace with changes," the RFI stated. "In addition to the antiquated technology, the system adds significant weight to the aircraft and consumes scarce space, weight, and power resources. The software platform is also obsolete and unsupportable."

During the technology maturation and risk reduction phase, Lockheed and Rockwell will be responsible for completing an ALCS-R preliminary design and create a "fully functional prototype," according to the contract announcement.

The service will downselect to a single competitor in the first quarter of fiscal 2021 for the engineering, manufacturing and development stage of the program, an Air Force official told Defense News.

In the FY18 budget, the Air Force requested \$78.5 million for the ALCS-R effort. Almost \$66 million was appropriated for FY17 expenses.

The ALCS-R program does not entail modifying the E-6B or selecting a new aircraft to house the airborne launch capability. Earlier this year, Gen. John Hyten, head of U.S. Strategic Command, told Congress that the E-6Bs are planned to fly until 2038, but that he has already directed the Navy to begin working with the Air Force on a replacement that could support the requirements of both services.

"We're only 20 years from 2038, so if you're going to build large aircraft with huge command and control [requirements], you have to start thinking about those things right now," he said then. "That's what the Navy is starting to do."

<https://www.defensenews.com/air/2017/10/04/lockheed-rockwell-get-contracts-to-develop-airborne-c2-system-for-launching-icbms/>

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US COUNTER-WMD

Southern Maryland Online (California, MD)

Maryland Lawmakers Move to Block Frederick Biolab Shutdown

By Angela Jacob

September 27, 2017

Lawmakers are fighting to preserve a long-standing research laboratory in Frederick after President Donald Trump's proposed budget for fiscal year 2018 eliminated the facility's funding.

The National Biodefense Analysis and Countermeasures Center, located at Fort Detrick in Frederick, is one of seven facilities of its kind in the country. The \$143 million center, which opened in 2010, operates under the Department of Homeland Security, employs more than 180 people and often assists the FBI and law enforcement agencies in investigating bioterrorism and biocrime.

Rep. John Delaney, D-Potomac, along with Maryland Democratic Sens. Ben Cardin and Chris Van Hollen successfully added amendments to a defense authorization bill to prevent the center from being immediately shut down.

At the end of May, Trump presented a detailed budget to Congress that included a 28 percent reduction in funding to the Science and Technology Directorate of DHS. The same week, the Frederick research center received a letter from DHS stating that the facility's closing procedures should start on Oct. 1, with anticipated decommissioning by Sept. 30, 2018.

"I am concerned that this is part of an ill-advised agenda by the Trump Administration to reduce investments in actually effective and important parts of our security portfolio in order to pursue a political agenda," Delaney said in a statement days after Trump presented his budget. "This looks like they're cutting everything they can find to pay for a wall along the Mexican border."

The Frederick biodefense center contains "Biosafety Level 4" labs, which is the highest safety classification. This accreditation is required for work with pathogens for which no vaccine or treatment exists, and it allows the program to test and analyze life-threatening agents such as anthrax and the Ebola virus.

DHS's Science and Technology budget proposal states that the Fort Detrick facility's capabilities "can be replicated at other facilities." The budget document also justified cuts to the lab facilities, saying the funds would go towards some of Trump's campaign promises.

"The proposed strategic reductions will ensure that S&T is right-sized for the future and allow S&T to focus on the highest priority needs of the Homeland Security Enterprise (HSE), such as border security and immigration technology," the document states.

The biosafety lab center is managed by Battelle National Biodefense Institute. Spokesman Brian Gaudet said the facility helps fulfill national safety goals.

"NBACC has two primary missions: one is threat characterization, basically looking at all the potential select agents that are out there that can be used against the American populace to harm human life," Gaudet said. "It's our job to basically look at the gaps out there, what potential select agents are out there, what do we know about it, and what can we propose to other agencies as countermeasures."

In addition to the work the Frederick facility does for the nation, it is also actively involved in the Frederick community through donations to the STEM programs in the county's public schools and helping initiate the Maryland Science Olympiad program, Gaudet added.

"We've been in Frederick for a decade," he said. "We've worked hard over that time to really become a part of the business and civic community in Frederick."

Fort Detrick also houses two other Biosafety Level 4 labs which were not fully defunded by Trump's budget proposal. These labs operate under the U.S. Army and the National Institute of Allergy and Infectious Diseases.

Delaney's amendment to the defense authorization measure prohibits any Biosafety Level 4 lab—including the one at Fort Detrick—from being closed or transferred until a more in-depth analysis of the laboratory's function and contributions is completed.

After Delaney's amendment was added to the bill, the House passed it and sent it to the Senate for consideration.

"Closing NBACC would be bad for Frederick, but it would be worse for the country: we should not do anything to weaken our biodefense capabilities," Delaney said.

In the Senate, Cardin and Van Hollen sponsored an additional amendment which added one provision to Delaney's: a transition period. This amendment established a grace period during which no federal funds "may be used to support the closure, transfer, or other diminishment of the NBACC or its functions."

This additional amendment allows the Frederick lab to continue operations for at least one year after the defense authorization bill is passed or 180 days after the analysis of the facility's operations is submitted to Congress, whichever date comes later.

"Preventing this closure will allow for the Department of Homeland Security to work with other agencies that rely on this lab, and ensure that our country does not lose this essential capability," Cardin said in a statement last week. "This will ensure our continued ability to understand and counter against biological threats to our national security."

The Senate version of the defense authorization bill passed on Sept. 18.

Gaudet said funding for the Frederick lab is in the House appropriations package, currently awaiting Senate action. For the time being, the program has funding until the end of the program year, March 18, 2018.

"They are all our champions," Gaudet said of Cardin, Van Hollen and Delaney, "and they've done a fantastic job to help keep our lab alive."

<https://somb.com/news/headlines/2017/22284.php>

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Diplomatic Courier (Washington, DC)

Double Helix, Dual-Use: Securing Synthetic Biological Laboratories

By Halia Czosnek

September 30, 2017

In July 2017, researchers in Portland, Oregon attempted to modify a human embryo to correct defective genes that are linked to a genetic disease. This experiment was possible with CRISPR-Cas9 technology, a powerful gene editing tool that is sold online for a few hundred dollars. These experiments will grow in complexity and number as CRISPR and other gene editing technology becomes ubiquitous: the market for CRISPR is projected to be worth more than \$1.5 billion by 2022.

While CRISPR technology has the potential to improve life and encourage learning, it also poses a significant global security challenge. Former U.S. Director of National Intelligence James Clapper described gene manipulation as a threat similar to that posed by “weapons of mass destruction and proliferation.” But as I argue in a recent white paper the danger of CRISPR lies not in the technology itself, but rather its use in poorly secured laboratories worldwide.

Bioterrorism is rightfully a growing concern for international security, however the accidental release of a modified pathogen from a laboratory is far more likely, given the number of laboratories conducting gene modification experiments, specifically on harmful pathogens. The consequences of a security breach from one of these under-secured CRISPR labs could be equally as catastrophic as a bioterror attack.

In 2011, two scientists in the United States and the Netherlands used gene editing technology to modify Avian flu (H5N1) so that the virus was easily transmitted through the air, rather than through bodily fluids, increasing the fatality rate of the virus beyond the typical rate of 60 percent. Imagine if their experiments moved beyond the walls of a controlled laboratory setting.

Documented security breaches in the United States have involved pathogens like anthrax, yet the United States is recognized as home to the safest and most secure laboratories in the world. If these kinds of accidents can happen in the United States, then what does laboratory safety look like in other countries? Waiting for accidents to happen anywhere in the world will put the entire international community behind the eight ball: we might already be facing a pandemic of epic proportions. And possibly a pandemic involving a never-encountered modified pathogen.

The lack of international laboratory security protocols highlights the need for a gold standard in laboratory security. In some labs, personnel were trained online without ever handling the pathogens that they would work with in a laboratory. While the United States’ system is imperfect, padlocked fridges are the highest form of laboratory security in many countries that do not have the expertise or finances to secure high-risk labs. The United States can use its documented experience from its reported laboratory failures to help standardize physical laboratory security and training protocols.

The United States should use the Cold War-era Nunn-Lugar nuclear safety program as a model for securing laboratories in partner countries. The Nunn-Lugar program has expanded since the 1990s to include the Cooperative Biological Engagement Program (CBE), which handles biological security concerns. CBE personnel could partner with other governments to physically secure government laboratories to limit the potential of pathogens escaping from controlled spaces. An expanded CBE program could provide standardized, in-person training to scientists working in laboratories capable of editing viruses.

The United States could provide both on-site training and publish security standards and laboratory manuals for partner countries. Laboratory workers trained through the expanded Nunn-Lugar program can train future employees using the standardized protocols and manuals. This training framework creates an efficient, enduring, and cost effective training program that enhances laboratory security.

If funding is unavailable to physically secure laboratories, creating standardized laboratory safety procedures is the next best step to prevent an accidental leak of a genetically modified pathogen into the outside environment. The framework would be most easily implemented in government laboratories as foreign governments could communicate with the United States throughout program implementation. One weakness of Nunn-Lugar is the issue of pathogen modification occurring in private laboratories as these labs are subject to less government regulation.

The expanded Nunn-Lugar Global Program is a necessary and economical first step to prevent the accidental or intentional misuse of genetically-modified pathogens. CRISPR is not the threat. The real threat arises when CRISPR is used to modify pathogens in under-secured laboratories worldwide. The United States can use its existing model to mitigate this risk in laboratories both at home and abroad. Rather than necessity being the mother of invention, proactivity must supersede necessity.

<https://www.diplomaticourier.com/2017/09/30/double-helix-dual-use-securing-synthetic-biological-laboratories/>

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Samaa.tv (Karachi, Pakistan)

US says on track to destroy chemical weapons by 2023

Author Not Attributed

September 30, 2017

The United States said Friday that it is on track to meet a 2023 deadline for destroying its stocks of chemical weapons and congratulated Russia on scrapping its own arms.

“The United States remains committed to the complete destruction of its declared chemical weapons. We are on track to meet our self-imposed deadline for complete destruction by the end of 2023,” a Pentagon spokesman told AFP.

“Over 90 percent of the United States stockpile has been destroyed,” the spokesman said, acknowledging that the target date had changed over the years due to “technological” challenges.

Russian President Vladimir Putin announced the destruction of his country’s last chemical weapons on Wednesday and accused Washington of dragging its feet.

The US “unfortunately is not carrying out its obligations when it comes to the timeframe of destroying chemical weapons — they pushed back the liquidation timeframe already three times,” Putin said.

The Pentagon spokesman noted that “Russia has solicited and received very significant funding from international donors,” including the US, which provided “over \$1 billion in financial and technical assistance for the Russian chemical weapon destruction program.”

“We congratulate the Russians on their completed chemical weapon destruction. This is an important milestone in the arms control and nonproliferation community,” the spokesman said.

Russia and the United States amassed huge stocks of chemical weapons during the Cold War, but had agreed to destroy them after joining the 1997 convention by April 2012.

Both Russia and the United States had to push back their deadlines for getting rid of their chemical weapons. AFP / SAMAA

<https://www.samaa.tv/international/2017/09/us-says-track-destroy-chemical-weapons-2023/>

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Global Biodefense (Seattle, WA)

Chemical and Biological Attacks: Underground Transport Restoration Project

Author Not Attributed

September 25, 2017

The United States said Friday that it is on track to meet a 2023 deadline for destroying its stocks of chemical weapons and congratulated Russia on scrapping its own arms.

A critical aspect of cleaning up chemical and biological warfare agents is figuring out what the contaminant is and how far it has spread. Sandia National Laboratories' engineer Bob Knowlton has worked on this challenge for a dozen years. His team has developed scientific sampling methods to determine the extent and nature of the contamination. Sampling also is essential to confirm the decontamination was effective and the site is safe to re-enter.

The Complexity of Subway System Decon

The DHS-sponsored Underground Transport Restoration project is wrapping up after four years of research. Sandia researchers and their collaborators at other national laboratories and local, state and federal agencies have looked at everything from how to clean subway stations and grimy tunnels to where a surrogate for anthrax would go when released inside the New York City subway system and the best way to decontaminate a subway car.

In July 2015, in collaboration with the Environmental Protection Agency, researchers tested the decontamination of a real subway car. At \$3 million to \$5 million each, subway cars aren't cheap, so operators need to clean them up to get the system back up and running again. An extra-strong dose of an industrial gaseous pesticide, methyl bromide, can kill anthrax spores without damaging the subway car, said Sandia National Laboratories engineer Mark Tucker.

However, the process is time-consuming and subway systems have a lot of cars. For instance, the New York City subway system has more than 6,000 railcars. Knowlton said, "When you think of the number of railcars and the time and effort it would take to decon a significant number, it's clear that it's pretty important to determine if a car has been contaminated."

Subway Contamination Screening Methods

The current way to test for anthrax is to take swabs, send them to a laboratory and watch for the growth of *Bacillus anthracis* bacteria. To speed up this process, Knowlton's team has worked out recommendations for the initial set of samples on the first day after a suspected release to aid decision-makers. These recommendations include suggested swab locations for subway tunnels, railcars, stations, even control rooms.

To reduce the number of swabs that need to be analyzed by laboratories, Knowlton's team looked at ways to improve that aspect of the process as well. The researchers developed methods to handle subway grime on swabs and suggestions for combining several samples in one culture. If no *Bacillus anthracis* bacteria grows, then all of those swab locations are clean.

In May 2016, researchers released harmless particles about the size of anthrax spores into the New York City subway system during operational hours. The test required more than 100 people from several national labs, the EPA and other state and federal agencies to collect thousands of samples to track the spread of particles. The data were used to update a model of the New York City subway system, which can be used to assess the spread of a potential release.

2016 Large-Scale Testing in Mock Subway System

Last fall, Sandia's team was involved in a large-scale test to figure out the best ways to decontaminate subway stations and tunnels. Subway tunnels tend to be cool and grimy, which makes them hard to clean, Tucker said. During the four-week test in the mock subway, the team looked at modifications to several common decontaminants to improve their effectiveness in subway conditions: bleach, common swimming pool chemicals and Sandia's decontamination foam.

In addition to the ingredients of the original decontamination foam — soapy surfactants and mild oxidizers like those found in toothpaste — the new version includes a chemical that helps the decon foam stick to the walls and even the ceilings of the subway tunnel longer, so the decontaminants can kill more of the anthrax. Sandia chemical engineer Patrick Burton developed this version.

Sandia's decontamination foam was originally developed with funding provided by the Department of Energy and National Nuclear Security Administration Chemical and Biological National Security Program. It has been licensed to companies, which have developed it for use in a variety of applications, such as commercial and residential mold remediation, disinfection of hospitals and schools and pesticide removal for farm equipment.

The other new Sandia technology the team tested was a spray knockdown system partly developed with Laboratory Directed Research and Development funds and refined by Sandia technologist Charles Brusseau. Using a very fine mist of charged liquid droplets, dilute decon foam or even plain water, they can attract and pull anthrax spores out of the air. This could prevent people from breathing in anthrax and might even help stop its spread.

Knowlton's team also demonstrated several new technologies to make sampling easier and more efficient. Among these technologies was a smartphone app to make sample record keeping more reliable and straightforward for those in the field. The app can also combine the laboratory results and the sample locations into a geospatial tool showing contamination hot spots to aid decision-makers. The researchers have even incorporated these tools into augmented and virtual reality systems.

Test Report Made Available to Stakeholders

Now that the multiagency group has developed and tested decontamination methods, they're compiling their findings into an instruction manual that includes guidance to help subways if a biological agent is ever released into their system. The manual will outline all the decontamination methods, with the strengths and limitations of each.

Once the report is completed and reviewed by the pertinent federal agencies, it will be available to municipal subway systems and emergency planners. Previous remediation projects published a 300-page document of their findings, but this project also will transfer its findings into a user-friendly software tool. This software will include a flowchart highlighting decision points. The local, state and

federal responders can select a decision such as “decontaminate subway cars” and see the information they need to make an informed choice.

In addition to DHS and EPA, the CDC and Lawrence Livermore, Argonne, Pacific Northwest and Brookhaven national laboratories and MIT Lincoln Laboratory took part in the Underground Transport Restoration project.

<https://globalbiodefense.com/2017/09/25/chemical-and-biological-attacks-underground-transport-restoration/>

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US ARMS CONTROL

The New York Times (New York, NY)

Mattis Contradicts Trump on Iran Deal Ahead of Crucial Deadline

By Thomas Gibbons-Neff and David Sanger

October 3, 2017

Days before President Trump has to make a critical decision on whether to hold up the Iran nuclear deal, Defense Secretary Jim Mattis openly split with him on abandoning the agreement, the second senior member of the president’s national security team to recently contradict him.

Mr. Mattis told senators on Tuesday that it was in America’s interest to stick with the deal, which Mr. Trump has often dismissed as a “disaster.”

“Absent indications to the contrary, it is something that the president should consider staying with,” Mr. Mattis told members of the Senate Armed Services Committee after being repeatedly pressed on the issue.

The comments were the latest example of how Mr. Trump’s instincts on national security — to threaten North Korea with destruction and tear up an Iran accord that most experts and allies say is working — are running headlong into opposition from his own National Security Council.

But rather than keep those arguments inside the White House Situation Room, where similar battles have played out over many presidencies, Mr. Trump’s key advisers are making no secret of their disagreements with their boss.

Mr. Mattis came to office with well-established, hawkish views of Iran, whose support of Syria’s government and of Hezbollah, he believed, had cost American lives. But he has always taken the position that if he had to confront Iran, he would rather confront a non-nuclear Iran, and that the agreement was preventing the country from possessing or making enough bomb-grade material for a weapon.

Asked on Capitol Hill on Tuesday whether he had changed his view, Mr. Mattis said he supports “the rigorous review that he has got going on right now.”

When that answer did not satisfy the committee, Senator Angus King, an independent from Maine, asked whether the defense secretary thought holding onto the nuclear pact is in the interest of the national security of the United States.

Mr. Mattis, a retired Marine general, paused before replying: “Yes, senator, I do.”

An administration official said that no difference existed between the president’s views and those of his secretary of defense on the Iran deal.

But the evident dissonance between the president and his senior national security advisers has taken on greater consequence in the cases of Iran and North Korea, which are potentially questions of war or peace.

Amid the simmering North Korean crisis, Secretary of State Rex W. Tillerson told reporters in Beijing over the weekend that he was keeping “a couple, three channels open to Pyongyang” to defuse the situation. The next morning, he was slapped down by Mr. Trump, who read newspaper accounts of that conversation and tweeted “save your energy Rex,” complaining that Mr. Tillerson was “wasting his time trying to negotiate with Little Rocket Man,” the president’s derisive nickname for Kim Jong-un, the North Korean leader.

White House officials said Mr. Trump was angry that his secretary of state was suggesting it was time to talk with North Korea, when official administration policy is that the North must earn the right — by halting missile and nuclear tests for an unspecified period of time.

It was hardly the first time that Mr. Tillerson, who is widely reported to be frustrated in the job, has publicly split with the president. In August, he conceded that he had argued in favor of keeping the Iran deal, saying he had “differences of views” from the president. At the same time, he acknowledged that Iran continued to support terrorism and was failing to comply with what he called “the spirit” of the agreement.

At the meeting with reporters in the American ambassador’s residence in Beijing, Mr. Tillerson hinted he was pressing Mr. Trump to certify to Congress once again that Iran is in compliance with the agreement despite Mr. Trump’s declaration in August that he would have declared the country “noncompliant 180 days ago.”

Mr. Trump must make that decision anew by Oct. 15. But his choice is not necessarily the final word on the deal. Even if he decertifies the agreement, Congress could hold back on restoring the economic sanctions that the United States agreed to ease in exchange for Iran halting its nuclear weapons program. If Congress did not act, the deal would be preserved.

“I don’t want to suggest to you that we’re not going to stick with the Iranian deal,” Mr. Tillerson said. “The president will have to make that decision; ultimately, it’s what he wants to do.”

Mr. Mattis told lawmakers on Tuesday that Tillerson was “probing opportunities to talk” with North Korea and sidestepped questions about the president’s tweets about his secretary of state.

And at his confirmation hearing in January, Mr. Mattis described the Iran deal as flawed but said the United States should remain committed to it, and to working with the other nations that negotiated it: Britain, France, Germany, Russia and China. “I think it is an imperfect arms control agreement — it’s not a friendship treaty,” Mr. Mattis said at the time. “But when America gives her word, we have to live up to it and work with our allies.”

In the first eight months of the Trump administration, Mr. Mattis has made a habit of navigating Trump’s bombast with measured — often seemingly contradictory — statements. He has warned about the potential for huge loss of life if the Korean crisis ended up resuming the war that ended in an armistice in 1953. Taken by surprise by the president’s tweet declaring a ban on transgender members of the military, he quietly got wording into the final executive order that gave him time to delay, or upend, the ban.

Inside the Pentagon, Mr. Mattis and the chairman of the Joint Chiefs of Staff, Gen. Joseph F. Dunford Jr., have told aides they are worried that abandoning the Iran deal could make it harder to convince North Korea that the United States would stick with any diplomatic agreement it might be able to reach to head off — or at least pause — the growing confrontation.

General Dunford testified at the same hearing alongside Mr. Mattis, and while he did not take a position on the Iran deal, his description about whether Tehran is violating the accord was at odds with the administration's talking points. He said Iran "is not in material breach" of the agreement and that it had "delayed the development of a nuclear capability by Iran."

White House officials, by contrast, have said that Iran was violating hortatory language in the agreement about fostering better relations, even if it is not reprocessing plutonium and enriching uranium, the two pathways to a bomb.

Diplomacy Works, an Iran deal advocacy group run by former Secretary of State John F. Kerry, who negotiated the accord, lauded Mr. Mattis's support for the pact.

"The president's most senior security adviser now joins the likes of the United States' closest allies and the International Atomic Energy Association in confirming that the Iran nuclear deal is not only working, and that Iran is in compliance, but that it remains the best agreement to protect American interests," the group said in a statement.

On the campaign trail, Mr. Trump repeatedly threatened to tear up the deal, and negotiate a better one. In August, Mr. Trump also said that Iran is "not in compliance with the agreement and they certainly are not in the spirit of the agreement in compliance."

<https://www.nytimes.com/2017/10/03/world/middleeast/mattis-iran-deal-trump.html>

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All Things Nuclear (Chicago, IL)

START from the Beginning: 25 Years of US-Russian Nuclear Weapons Reductions

By Eryn MacDonald

September 28, 2017

For the past 25 years, a series of treaties have allowed the US and Russia to greatly reduce their nuclear arsenals—from well over 10,000 each to fewer than 2,000 deployed long-range weapons each. These Strategic Arms Reduction Treaties (START) have enhanced US security by reducing the nuclear threat, providing valuable information about Russia's nuclear arsenal, and improving predictability and stability in the US-Russia strategic relationship.

Twenty-five years ago, US policy-makers of both parties recognized the benefits of the first START agreement: on October 1, 1992, the Senate voted overwhelmingly—93 to 6—in favor of ratifying START I.

The end of START?

With increased tensions between the US and Russia and an expanded range of security threats for the US to worry about, this longstanding foundation is now more valuable than ever.

The most recent agreement—New START—will expire in early February 2021, but can be extended for another five years if the US and Russian presidents agree to do so. In a January 28 phone call with

President Trump, Russian President Putin reportedly raised the possibility of extending the treaty. But instead of being extended, or even maintained, the START framework is now in danger of being abandoned.

President Trump has called New START “one-sided” and “a bad deal,” and has even suggested the US might withdraw from the treaty. His advisors are clearly opposed to doing so. Secretary of State Rex Tillerson expressed support for New START in his confirmation hearing. Secretary of Defense James Mattis, while recently stating that the administration is currently reviewing the treaty “to determine whether it’s a good idea,” has previously also expressed support, as have the head of US Strategic Command and other military officials.

Withdrawal seems unlikely, especially given recent anonymous comments by administration officials saying that the US still sees value in New START and is not looking to discard it. But given the president’s attitude toward the treaty, it may still take some serious pushing from Mattis and other military officials to convince him to extend it. Worse, even if Trump is not re-elected, and the incoming president is more supportive of the treaty, there will be little time for a new administration, taking office in late January 2021, to do an assessment and sign on to an extension before the deadline. While UCS and other treaty supporters will urge the incoming administration to act quickly, if the Trump administration does not extend the treaty, it is quite possible that New START—and the security benefits it provides—will lapse.

The Beginning: The Basics and Benefits of START I

The overwhelming bipartisan support for a treaty cutting US nuclear weapons demonstrated by the START I ratification vote today seems unbelievable. At the time, however, both Democrats and Republicans in Congress, as well as the first President Bush, recognized the importance of the historic agreement, the first to require an actual reduction, rather than simply a limitation, in the number of US and Russian strategic nuclear weapons.

By the end of the Cold War, the US had about 23,000 nuclear warheads in its arsenal, and the Soviet Union had roughly 40,000. These numbers included about 12,000 US and 11,000 Soviet deployed strategic warheads—those mounted on long-range missiles and bombers. The treaty limited each country to 1,600 strategic missiles and bombers and 6,000 warheads, and established procedures for verifying these limits.

The limits on missiles and bombers, in addition to limits on the warheads themselves, were significant because START required the verifiable destruction of any excess delivery vehicles, which gave each side confidence that the reductions could not be quickly or easily reversed. To do this, the treaty established a robust verification regime with an unprecedented level of intrusiveness, including on-site inspections and exchanges of data about missile telemetry.

Though the groundwork for START I was laid during the Reagan administration, ratification and implementation took place during the first President Bush’s term. The treaty was one among several measures taken by the elder Bush that reduced the US nuclear stockpile by nearly 50 percent during his time in office.

START I entered into force in 1994 and had a 15-year lifetime; it required the US and Russia to complete reductions by 2001, and maintain those reductions until 2009. However, both countries actually continued reductions after reaching the START I limits. By the end of the Bush I administration, the US had already reduced its arsenal to just over 7,000 deployed strategic warheads. By the time the treaty expired, this number had fallen to roughly 3,900.

The Legacy of START I

Building on the success of START I, the US and Russia negotiated a follow-on treaty—START II—that required further cuts in deployed strategic weapons. These reductions were to be carried out in two steps, but when fully implemented would limit each country to 3,500 deployed strategic warheads, with no more than 1,750 of these on submarine-launched ballistic missiles.

Phase II also required the complete elimination of independently targetable re-entry vehicles (MIRVs) on intercontinental ballistic missiles. This marked a major step forward, because MIRVs were a particularly destabilizing configuration. Since just one incoming warhead could destroy all the warheads on a MIRVed land-based missile, MIRVs create pressure to “use them or lose them”—an incentive to strike first in a crisis. Otherwise, a country risked losing its ability to use those missiles to retaliate in the case of a first strike against it.

While both sides ratified START II, it was a long and contentious process, and entry into force was complicated by provisions attached by both the US Senate and Russian Duma. The US withdrawal from the Anti-Ballistic Missile (ABM) treaty in 2002 was the kiss of death for START II. The ABM treaty had strictly limited missile defenses. Removing this limit created a situation in which either side might feel it had to deploy more and more weapons to be sure it could overcome the other’s defense. But the George W. Bush administration was now committed to building a larger-scale defense, regardless of Russia’s vocal opposition and clear statements that doing so would undermine arms control progress.

Russia responded by announcing its withdrawal from START II, finally ending efforts to bring the treaty into force. A proposed START III treaty, which would have called for further reductions to 2,000 to 2,500 warheads on each side, never materialized; negotiations had been planned to begin after entry into force of START II.

After the failure of START II, the US and Russia negotiated the Strategic Offensive Reductions Treaty (SORT, often called the “Moscow Treaty”). SORT required each party to reduce to 1,700 to 2,200 deployed strategic warheads, but was a much less formal treaty than START. It did not include the same kind of extensive verification regime and, in fact, did not even define what was considered a “strategic warhead,” instead leaving each party to decide for itself what it would count. This meant that although SORT did encourage further progress to lower numbers of weapons, overall it did not provide the same kind of benefits for the US as START had.

New START

Recognizing the deficiencies of the minimal SORT agreement, the Obama administration made negotiation of New START an early priority, and the treaty was ratified in 2010.

New START limits each party to 1,550 deployed strategic nuclear warheads by February 2018. The treaty also limits the number of deployed intercontinental ballistic missiles, submarine-launched ballistic missiles, and long-range bombers equipped to carry nuclear weapons to no more than 700 on each side. Altogether, no more than 800 deployed and non-deployed missiles and bombers are allowed for each side.

In reality, each country will deploy somewhat more than 1,550 warheads—probably around 1,800 each—because of a change in the way New START counts warheads carried by long-range bombers. START I assigned a number of warheads to each bomber based on its capabilities. New START simply counts each long-range bomber as a single warhead, regardless of the actual number it does or could carry. The less stringent limits on bombers are possible because bombers are considered less destabilizing than missiles. The bombers’ detectability and long flight times—measured in hours vs. the

roughly thirty minutes it takes for a missile to fly between the United States and Russia—mean that neither side is likely to use them to launch a first strike.

Both the United States and Russia have been moving toward compliance with the New START limits, and as of July 1, 2017—when the most recent official exchange of data took place—both are under the limit for deployed strategic delivery vehicles and close to meeting the limit for deployed and non-deployed strategic delivery vehicles. The data show that the United States is currently slightly under the limit for deployed strategic warheads, at 1,411, while Russia, with 1,765, still has some cuts to make to reach this limit.

Even in the increasingly partisan atmosphere of the 2000s, New START gained support from a wide range of senators, as well as military leaders and national security experts. The treaty passed in the Senate with a vote of 71 to 26; thirteen Republicans joined all Democratic senators in voting in favor. While this is significantly closer than the START I vote, as then-Senator John F. Kerry noted at the time, “in today’s Senate, 70 votes is yesterday’s 95.”

And the treaty continues to have strong support—including from Air Force General John Hyten, commander of US Strategic Command, which is responsible for all US nuclear forces. In Congressional testimony earlier this year, Hyten called himself “a big supporter” of New START and said that “when it comes to nuclear weapons and nuclear capabilities, that bilateral, verifiable arms control agreements are essential to our ability to provide an effective deterrent.” Another Air Force general, Paul Selva, vice chair of the Joint Chiefs of Staff, agreed, saying in the same hearing that when New START was ratified in 2010, “the Joint Chiefs reviewed the components of the treaty—and endorsed it. It is a bilateral, verifiable agreement that gives us some degree of predictability on what our potential adversaries look like.”

The military understands the benefits of New START. That President Trump has the power to withdraw from the treaty despite support from those who are most directly affected by it is, as he would say, “SAD.”

That the US president fails to understand the value of US-Russian nuclear weapon treaties that have helped to maintain stability for more than two decades is a travesty.

<http://allthingsnuclear.org/emaacdonald/25-years-of-start>

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The Independent Barents Observer (Kirkenes, Norway)

Russia is close to fulfill New START Treaty

By Thomas Nilsen

October 4, 2017

Since July, Russia’s strategic nuclear force is reduced by 204 warheads. In the north, though, no reduction is seen.

Latest New START Treaty aggregate numbers published by the Bureau of Arms Control, Verification, and Compliance with the U.S. Department of States tells that Russia by October 1 has 1,561 deployed nuclear warheads in its strategic forces.

That is a reduction from 1,765 warheads in last report from July 1.

With the recent sharp cut in nuclear arms, Russia has just six more warheads to remove before fulfilling the maximum limit set by the New START Treaty to be reached by February 5, 2018.

The numbers includes warheads in all three legs of the nuclear triad, that be land-based intercontinental ballistic missiles (ICBMs), strategic bombers and submarine-launched ballistic missiles (SLBMs).

There are no reports on reduction in warheads deployed on the Sineva- and Bulava missiles carried by the Russian navy's fleet of Delta-IV and Borei-class submarines. It is therefore reasonable to believe that the reduction counts for less warheads deployed on land-based ballistic missiles, either in silos or mobile based.

With Gadzhiyev on the Kola Peninsula as home port, the Northern Fleet operates six Delta-IV submarines and one of the Borei-class. Each of the submarines can carry up to 64 nuclear warheads, four in each of the 16 missiles on board. That would be 448 in total for the operational submarines sailing the Barents Sea and Arctic waters.

In May, a long-read from the Barents Observer disclosed that Russia is currently expanding the onshore storage sites for nuclear weapons on the Kola Peninsula. The New START Treaty does not include non-strategic nuclear weapons, but it is believed that the Russian navy does not sail with nuclear armed cruise-missiles or torpedos on its fleet of multi-purpose submarines or other warships.

The New START (Strategic Arms Reduction Treaty) was signed between Russia and the United States in 2010. The agreement replace the Treaty of Moscow that expired in 2012, and has its name from the START I treaty which expired in 2009. The START-II treaty was agreed on but never entered force.

The agreement says that by February 2018, there can be no more than 1,550 deployed warheads on both sides.

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AzerNews (Baku, Azerbaijan)

U.S. not ready for talks on further nuclear disarmament

By Kamila Aliyeva

October 4, 2017

The challenging situation in the world hinders the implementation of the Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (START III or New START).

The United States is committed to its obligations under the New START, but considers that the current international situation does not allow negotiations on further steps in the field of nuclear disarmament.

This was stated by Assistant Secretary of State for Arms Control Anita Friedt at the first Committee debate of the UN General Assembly on October 3, the UN press service reported.

American side has made many steps to reduce nuclear weapons, doing so in a way that maintains strategic stability, Friedt noted.

"The total nuclear stockpile was down 87 per cent since its cold war peak and it expected to meet the central limits of 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 Treaty) when they took effect in February 2018. While those actions made clear the United States' commitment

to Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons, the current security environment was challenging,” she said.

Pointing to several challenges, she said the single greatest security threat was the North Korea’s development of nuclear weapons. Supporting a diplomatic solution to the crisis, the United States did not seek a “regime change” or “an excuse” to send its military north of the Korean demilitarized zone, according to the U.S. diplomat.

Friedt, in her speech, also called the situation in Syria to be another challenge for the New START implementation.

The Bashar Al-Assad regime must fully declare its chemical weapons programme and cooperate with the Organization for the Prohibition of Chemical Weapons - United Nations Joint Investigative Mechanism, she said while commenting on the use of chemical weapons in Syria.

The State Department has previously released a certificate on compliance by the two countries with their obligations under the New START Treaty.

Russia declared 1,561 deployed warheads, 501 deployed launchers, and 790 total launchers as of September 1, 2017. In March 2017 the numbers were 1765, 523, and 816 respectively.

The U.S. numbers for September 2017 were 1,393 warheads, 660 deployed and 800 total launchers (1411, 673, and 820 in March 2017).

Recently, U.S. President Donald Trump has called New START, which was signed in 2010, “one-sided” and “a bad deal,” and has even suggested the U.S. might withdraw from it.

Turning to the recently signed at United Nations Headquarters treaty which prohibits nuclear weapons, she said that the U.S. couldn’t take such an ‘irresponsible’ step.

“It would be irresponsible for the United States to subscribe to the Treaty on the Prohibition of Nuclear Weapons,” Friedt noted.

The instrument was “counterproductive” and served to reinforce and widen political divisions in existing bodies, while hindering the existing non-proliferation and disarmament system, according to the diplomat.

This treaty was approved on July 7 at the talks that major nuclear powers (Russia, the United Kingdom, the United States, China and France) skipped. Under the treaty, the parties will be obliged "never under any circumstances to develop, test, produce, manufacture, otherwise acquire, possess or stockpile nuclear weapons or other nuclear explosive devices." Non-nuclear signatory states are prohibited to deploy in their national territories the nuclear weapons of third countries.

The document will come into force 90 days after at least 50 states ratify it. The UK, U.S. and France released a joint statement vowing they would never become party to the treaty. Meanwhile, the Russian Foreign Ministry said that Moscow would not ratify the deal as it runs counter to the country’s national interests.

<https://www.azernews.az/region/119972.html>

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ASIA-PACIFIC

The Japan Times (Tokyo, Japan)

White House again rules out talks as North Korea threatens Japan with ‘nuclear clouds’

By Jesse Johnson

October 3, 2017

The White House on Monday poured more cold water on potential talks with North Korea over its nuclear weapons program just days after U.S. Secretary of State Rex Tillerson said Washington was in direct contact with leader Kim Jong Un’s regime.

The move came as North Korean state media threatened Japan with “nuclear clouds” and lambasted Prime Minister Shinzo Abe’s push for maximum pressure on the isolated nation.

“Now is not the time to talk,” White House spokeswoman Sarah Sanders said Monday, further reinforcing President Donald Trump’s view that Tillerson was “wasting his time trying to negotiate with Little Rocket Man,” a mocking reference to Kim.

Trump on Sunday had dismissed Tillerson’s earlier comments that the U.S. was probing Pyongyang’s interest in talks, urging him to save his energy.

“We’ll do what has to be done!” Trump tweeted.

The North conducted its sixth and largest nuclear test — purportedly of a thermonuclear, or hydrogen, bomb — on Sept. 3, and has launched dozens of missiles this year — including two over Japan — as it moves closer to mastering the technology needed to reliably target the United States with a nuclear-tipped missile.

In July, it conducted two tests of an intercontinental ballistic missile that experts say is capable of striking a large chunk of the United States.

Pyongyang maintains that its nuclear and missile programs are crucial to the Kim regime’s survival and has ruled out denuclearization — a key condition for the U.S. in any talks with the North — calling its atomic arsenal a “war deterrent.”

Asked about Trump’s and Tillerson’s remarks, Sanders said that the focus of any conversations with the North had been and will continue to be on the three Americans detained in the reclusive country.

“The only conversations that have taken place, or that would . . . be on bringing back Americans who have been detained,” Sanders said, according to a transcript of her news conference. “Like with Otto (Warmbier), those were the type of conversations that this administration was willing to have. Beyond that, there will be no conversations with North Korea at this time.”

Warmbier, a U.S. college student, was jailed in Pyongyang in 2016 for allegedly attempting to steal a propaganda poster from his hotel while visiting the country. He was released on medical grounds in June but arrived home seriously ill and died days later, a fate his parents and Trump blamed on torture, but which medical examiners could not confirm.

Sanders’ comments stood in stark contrast to Tillerson’s remarks over the weekend in Beijing, where he told reporters: “We can talk to them, we do talk to them directly” and that the U.S. has “a couple, three channels open to Pyongyang.”

The Trump administration has appeared to settle into a policy of pressuring Kim's regime into returning to the negotiating table — on Washington's terms — heaping both stringent unilateral and United Nations sanctions onto the country.

Trump has also variously threatened it with “fire and fury” and to “totally destroy” the country of 25 million people if the United States is forced to defend itself or its allies, including Japan. He has repeatedly said that all options — including military action — remain on the table for reining in its nuclear weapons ambitions. And in another tweet late last month, the U.S. president also appeared to advocate regime change, saying that Kim and North Korean Foreign Minister Ri Yong Ho “won't be around much longer” after Ri hinted at a possible nuclear weapons test over the Pacific Ocean.

Still, Sanders stressed that the White House's approach does not mean an end to diplomacy and suggested that efforts to pressure the Kim regime will continue.

“There's a difference between talking and putting diplomatic pressure. We still strongly support putting diplomatic pressure on North Korea, which we're continuing to do,” Sanders said.

“We've encouraged all of our allies and partners to do more, and we're going to continue to keep all options on the table when it comes to that,” she added.

In response to the increasingly fraught security environment, Prime Minister Shinzo Abe has forged close ties with the mercurial Trump in a bid to bolster the U.S.-Japan alliance.

The Japanese leader has hewed closely to Washington's calls for the North to denuclearize, issuing a stern speech at the U.N. General Assembly and even going so far as to write in an editorial in The New York Times last month that pressure, not diplomacy, should be prioritized.

“Dialogue,” Abe wrote, referencing past diplomatic failures, “will not work with North Korea.”

Late Monday, the North's official Korean Central News Agency blasted Abe's stance, calling the tactic a “suicidal deed” that “will bring nuclear clouds” to the country.

The KCNA commentary ripped into Abe's moves, characterizing him as “running around the U.N. stage like a headless chicken” for meetings with world leaders on the North Korean issue and blasting the prime minister as using the crisis to win votes ahead of an Oct. 22 Lower House election.

“Japan's such rackets inciting the tension of the Korean Peninsula is a suicidal deed that will bring nuclear clouds to the Japanese archipelago,” the commentary said.

“No one knows when the touch-and-go situation will lead to a nuclear war, but if so, the Japanese archipelago will be engulfed in flames in a moment.”

<https://www.japantimes.co.jp/news/2017/10/03/asia-pacific/white-house-rules-talks-north-korea-threatens-japan-nuclear-clouds/#.WdYnDGSnFTY>

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Reuters (New York, NY)

Australia to fit warships with anti-missile defense systems

By Colin Packham

October 2, 2017

Australian Prime Minister Malcolm Turnbull said on Tuesday nine war ships set for construction in 2020 will be fitted with long-range anti-missile defense systems to counter the threat of rogue nations.

Australia's proposed frigates will use Aegis combat systems, produced by Lockheed Martin, in conjunction with SAAB Australia technology, Turnbull said.

Tensions in the region have spiked considerably in recent months as North Korea conducted a series of tests of its medium- and long-range ballistic missiles, some of which flew over Japan, as well as its sixth nuclear test on Sept. 3.

Pyongyang, which ultimately wants to target the U.S. mainland with a nuclear-tipped ballistic missile, has said its missiles could strike Australia.

"Recent events in our region have proven that Australia's future frigates must be equipped to defend Australia from the threat of medium- and long-range missile attacks," Turnbull said in a speech in Sydney.

Work on the frigates is set to begin in 2020, with BAE Systems, Navantia and Fincantieri all competing for the A\$35 billion (\$27.39 billion) contract.

Turnbull said the decision to award the missile defense system contract allows the three bidders enough time to incorporate Aegis technology into their bids.

Australia is expected to announce the winner of the frigate contract in early 2018.

The decision to fit the frigates - also a cornerstone of Australia's plan to counter an expected rise in submarine activity in the region - suggests Canberra will use the ships in a dual capacity.

"The missile defense will protect Australia's forward based forces and in a coalition scenario," said Euan Graham, director of the national security program at the Lowy Institute, an Australian think-tank.

Countering submarines requires vessels that move freely in the region, in contrast to static vessels used for detecting missiles.

The decision to use the Aegis ballistic missile defense systems brings Australia in line with U.S., Japanese and Korean vessels, allowing international cooperation, Vice Admiral Tim Barrett, Australia's navy chief, told reporters in Sydney.

"The choice of the Aegis system allows Australia to plug into the U.S. alliance. They will be able to share data from vessels and potentially aircraft," said Graham.

The frigates will be the next major component of Australia's plan to increase defense spending by A\$30 billion to be worth A\$195 billion, or 2 percent of GDP, by 2021-2022 as Canberra seeks to protect its strategic and trade interests in the Asia-Pacific.

Australia selected French naval contractor DCNS last year to build its fleet of 12 submarines, ahead of other offers from Japan and Germany, one the world's most lucrative defense contracts.

<https://www.reuters.com/article/us-australia-defence/australia-to-fit-warships-with-anti-missile-defense-systems-idUSKCN1C72YM>

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Caspian News (Baku, Azerbaijan)

Astana Recognizes More Than Two Decades Of Nuclear Disarmament, Non-Proliferation

By Aygul Ospanova

September 25, 2017

While Kazakhstan ranks near the top of the world's list of countries possessing the most nuclear material, such as uranium, nuclear security has always been a top priority for the government in Astana. Last week, Kazakhstan completed two major initiatives centered on nuclear disarmament, some of the largest ever undertaken.

Energy Minister Kanat Bozumbayev signed a protocol with Alexey Likhachev, the Director General of Russia's nuclear regulatory body Rosatom State Atomic Energy Corporation, in Vienna on September 19, during the 61st International Atomic Energy Agency (IAEA) General Conference, recognizing the completion of a disposal project that went into effect on January 20, 1995. As a result of the 22 years-long effort, about 500 tons of weapons grade uranium had been extracted from nuclear ammunition that was left over in Russia and Kazakhstan during the Soviet era, and repurposed for civilian nuclear usage.

At the same time, Kazakhstan liquidated the last reserves of highly enriched uranium (HEU) being used in pressurized water reactor in Kazakhstan's former capital city of Almaty. With help from the US National Nuclear Security Administration, Kazakhstani scientists from the Institute of Nuclear Physics were able to destroy more than 200 kilograms (441 lbs) of HEU, enough to create eight nuclear warheads.

To convert the pressurized water reactor into a reactor that uses low enriched uranium (LEU) as its fuel source, scientists from the US and Kazakhstan worked to develop a new fuel assembly for LEU with a higher density, in turn making the reactor more efficient.

"Within the framework of the recent liquidation activities, the Institute of Nuclear Physics has become free of highly enriched uranium, thus eliminating the possibility of terrorists obtaining materials for the creation of nuclear weapons," said David Husenga, Acting Deputy Administrator of the National Nuclear Security Administration on Nuclear Non-Proliferation, according to KazInform news agency.

"The achievement of non-proliferation is particularly important, as it emphasizes Kazakhstan's commitment to ensuring the security of nuclear material," he said.

After the collapse of the USSR in 1991, Kazakhstan was left with its largest repository of nuclear material. Under Soviet rule, it had been the largest test site for nuclear weapons, leaving entire areas uninhabitable and decimated by radiation, including cities like Emba, Sary-Shagan, Baikonur, and Semipalatinsk, better known as "The Polygon," and the Soviet Union's largest test site.

Despite the temptation to keep the newfound republic stockpiled and armed with nuclear weapons, President Nursultan Nazarbayev renounced nuclear defense capabilities and closed down the Semipalatinsk nuclear test site on August 29, 1991. Together with Moscow, Minsk, and Kiev, Astana joined the Strategic Arms Reduction Treaty, signed in Lisbon on May 22, 1992.

Two years later, the American and Kazakhstani governments launched covert project dubbed "Sapphire" in a bid to reduce the threat of nuclear proliferation as part of the US Department of Defense's Cooperative Threat Reduction Program. Through that initiative the US removed nearly 600 kilograms

(1,100 lbs) of weapons-grade enriched uranium placed in a warehouse at the Ulba Metallurgical Plant outside Ust-Kamenogorsk.

Energy-rich Kazakhstan is a staunch supporter of global nonproliferation efforts. It remains a member of the Nuclear Non-Proliferation Treaty, the Comprehensive Test Ban Treaty and the Central Asian Nuclear Weapon Free Zone, to promote nuclear disarmament, non-proliferation, as well as control, accounting and physical security of nuclear material.

On August 29 – exactly 26 years after shutting down facilities in Semipalatinsk – Kazakhstan launched the world’s first low enriched uranium bank in the northeastern city of Oskemen, close to the country’s border with Russia. The bank contains 90 metric tons of low-enriched uranium, suitable to make fuel for a light water nuclear reactor. Countries that make withdrawals from the bank will be those that rely on nuclear power but lack enrichment facilities to provide fuel for their power plants’ nuclear reactors. The bank is owned and managed by the International Atomic Energy Agency.

“We have showed political will and refused membership in the nuclear club. Despite the tough confrontation of the then Soviet leadership, I signed a decree on closing the test site,” President Nazarbayev said, referring to Semipalatinsk. “The day of August 29 became a benchmark for the whole of Central Asia, a region that became free of nuclear weapons.”

<https://caspiannews.com/news-detail/astana-recognizes-more-than-two-decades-of-nuclear-disarmament-non-proliferation-2017-9-24-53/>

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MIT News (Cambridge, MA)

Nuclear and present danger

By Peter Dizikes

October 4, 2017

MIT security experts discuss how to lower tensions between the U.S. and North Korea.

Rising tensions between the U.S. and North Korea have an unsettling chance of escalating, MIT security experts said at a public forum on Tuesday — but are also manageable given the right approach by U.S. leaders.

“I think you can get inadvertent war,” said Jim Walsh, a senior research associate in MIT’s Security Studies Program (SSP) and a nuclear security expert who has visited North Korea in the past. “It’s still an unlikely event,” he added. However, he also stated, “I would remind you that improbable events do happen. ... I am more worried than I have been before.”

To keep the situation under control, the panel of three nuclear-security scholars said, the U.S. would do well to seek further diplomatic talks with North Korea. The U.S. should also reconcile itself to the fact that North Korea does have nuclear weapons and, for a variety of reasons, it must not expect China to address the situation decisively.

“We should certainly be talking to them,” said Walsh, who, like others on the panel, believes that North Korea’s nuclear capacity is almost certainly here to stay.

“The bad news is that denuclearization is a fantasy,” said Vipin Narang, an associate professor of political science at MIT, who has written extensively about North Korea’s nuclear program and gave a summary of the country’s current capabilities. “The good news is, deterrence can work.”

Meanwhile China — who some U.S. leaders, including President Donald J. Trump, have sometimes cited as a key actor in this scenario, given its political alignment with North Korea — seems unwilling to play a larger role in the current state of affairs.

“I think China believes that the North Koreans are developing nuclear weapons for perfectly [logical] reasons,” said Taylor Fravel, an associate professor of political science at MIT and interim director of MIT’s Center for International Studies (CIS). Fravel, a leading expert on China’s foreign-policy conflicts, added that Chinese leaders, who maintain their own nuclear arsenal, likely view North Korea’s weapons as “an insurance policy, one they [China] can see in their own history.”

The event drew a crowd of at least 225 people, packing a lecture hall in MIT’s Building 34. The three panelists all delivered prepared remarks and responded to a series of audience questions. The discussion was part of the CIS Starr Forum, a series of public discussions on world politics.

North Korea: New arsenal, familiar strategy

Narang gave the audience an overview of which types of missiles and nuclear payloads North Korea has developed, based on the best public knowledge available. North Korean leader Kim Jong Un has publicly announced a lengthy series of tests over the course of 2017.

“He acquired nuclear weapons to avoid a U.S.-led regime change,” Narang said, adding that the North Korean strategy is “risky, but it’s not irrational.”

Indeed, Narang emphasized, the North Korean nuclear strategy is precisely the same one used by Pakistan and, to a large degree, NATO forces during the Cold War. North Korea has seemingly developed short-range missiles capable of delivering nuclear bombs, and as of this summer, an intercontinental ballistic missile (ICBM) capable of reaching North America.

Both types of missiles are necessary for North Korea to achieve a kind of mutual deterrence with the U.S., Narang pointed out. That is, if North Korea only had shorter-range missiles and used them to deliver a nuclear bomb in, for instance, a conflict with South Korea, then South Korea’s allies — namely, the U.S. — could respond by essentially wiping out North Korea in retaliation.

However, the presence of North Korean ICBMs that could deliver nuclear weapons to North America stands as a deterrent to such a U.S. reply, hypothetically.

“That’s why the ICBM is so important” to North Korea, Narang pointed out, adding that North Korea can now “put the U.S. homeland at risk.”

On the other hand, Narang pointed out, the U.S. has experience and know-how at maintaining forms of equilibrium among nuclear powers with the same sets of capabilities — not only the former Soviet Union and Russia, but more recently, Pakistan, among other cases.

So: What should be done?

That leaves open the matter of what the U.S. should be doing, specifically. For starters, Narang said, “We need to tighten our message and be consistent and coherent.”

Secretary of State Rex Tillerson and Secretary of Defense James Mattis, he pointed out, have both publicly stated that regime change in North Korea is not a U.S. goal. According to the terms of nuclear logic, that should settle the situation somewhat. However, Trump has used more belligerent language, both in a recent speech at the United Nations and in his Twitter messages.

“Why would Kim think we might attack him? Because we keep saying that over and over again,” Walsh said.

Additionally, Narang stated, the U.S. should almost certainly not attempt a military attack on North Korean military sites in an attempt to eliminate its weapons program, due partly to the extreme difficulty of identifying and hitting every relevant site.

“Denuclearization by force is a very risky proposition and it’s not an experiment we want to run,” Narang said.

Walsh added that he was “not a big believer that sanctions are going to solve this problem,” given North Korea’s current capabilities, and Fravel emphasized that China is also not likely to be interested in having regime change occur in North Korea. Among other reasons, he noted, “the collapse of any more communist countries would be a great concern for China.”

Instead, Walsh and Narang concluded, further talks with North Korea might help limit the extent of North Korea’s arsenal and reduce the possibility that U.S.-led military exercises around the Korean peninsula could trigger a military incident that escalates to nuclear use — which, the scholars observed, seems by far the most likely route to a catastrophic exchange between the countries.

“Giving up on denuclearization doesn’t mean you give up on nonproliferation,” Narang said.

However, observers have concerns about many types of things that could unsettle the situation in North Korea. Scott Sagan, a Stanford University professor and leading nuclear-security expert who was in the audience for the event, pointed out during the question-and-answer period that false news reports circulated last weekend, stating that the U.S. was advising nonessential personnel to depart the Korean peninsula. That kind of report, Sagan noted, could be mistakenly interpreted as a prelude to military action.

“I’m worried about this, even though I think it is unlikely,” Sagan said. And, as Walsh added, “Certain leaders in the world pay more attention to news reports than to their advisors.”

With so many unresolved issues at stake, Walsh said, “That uncertainty makes me nervous, and gnaws at me.”

<http://news.mit.edu/2017/nuclear-and-present-danger-security-experts-us-north-korea-1004>

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EUROPE/RUSSIA

Mehr News Agency (Tehran, Iran)

Ireland stresses EU’s resolve for preserving N-deal

Author Not Attributed

October 3, 2017

In a Tue. presser in Tehran, chairman of Irish Senate highlighted the resolve of European Union to take utmost advantage of every capacity of Iran’s nuclear deal for further expansion of relations.

Iranian Parliament Speaker Ali Larijani held a press conference with Chairman of the Senate of Ireland, Denis O’Donovan, on Tuesday in Tehran, during which the two sides voiced interest in investing in new technologies, renewable energies, pharmaceuticals, medical equipment, as well as oil and gas.

“Iran and Ireland both hold the same opinion that the nuclear deal is an international agreement that must be preserved and all parties to the deal must remain committed to their obligations,” Larijani said.

He went on to discuss regional developments, expressing Iran’s strong opposition to any acts of disturbance in regional affairs, particularly any moves toward separation.

The visit of the chairman of the Irish Senate will be an important step toward increasing the level of trade, political and security ties between the two countries, Larijani added.

The head of Irish Senate, for his part, stressed European governments’ belief that the nuclear deal will benefit Iran, the EU and global peace as a whole, and went on to vow that the EU would make use of every diplomatic capacity to continue the implementation of the JCPOA.

He also thanked Iran for its tremendous efforts in combating terrorism, voicing his country’s readiness to cooperate with the Islamic Republic in fighting this global scourge.

O’Donovan further deemed necessary the expansion of ties with Iran in exports of agricultural products, pharmaceuticals, and medical equipment, announcing the upcoming visit of an Irish economic delegation to Iran to improve trade relations between the two sides.

<http://en.mehrnews.com/news/128294/Ireland-stresses-EU-s-resolve-for-preserving-N-deal>

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Reuters (New York, NY)

Europe will do everything to preserve Iran nuclear deal: EU diplomat

By John Miller

October 4, 2017

European countries will do their utmost to preserve a deal limiting Iran’s nuclear program despite misgivings by U.S. President Donald Trump, a senior European Union diplomat said on Wednesday.

“This is not a bilateral agreement, it’s a multilateral agreement. As Europeans, we will do everything to make sure it stays,” Helga Schmid, secretary general of the EU’s foreign policy service, told an Iranian investment conference in Switzerland’s financial capital.

The deal was brokered in 2015 by the bloc between Iran, the United States, France, Germany, Britain, Russia and China.

Trump is weighing whether the pact serves U.S. security interests as he faces an Oct. 15 deadline for certifying that Iran is complying, a decision that could sink an agreement strongly supported by the other world powers that negotiated it.

Schmid said Europe has concerns about Iran’s role in regional affairs, but that those issues were not part of the nuclear accord known as the Joint Comprehensive Plan of Action.

“I’m absolutely convinced we will not be in a better place to address any of these issues by ditching the JCPOA,” Schmid said.

“The world does not need a second nuclear proliferation crisis. One is already too many,” she added in an apparent reference to Washington’s standoff with North Korea.

Nicholas Hopton, Britain’s ambassador to Iran, said the U.N. nuclear watchdog’s reports had shown Iran was fully complying with terms of the accord.

"We hope that President Trump will recertify the deal and that the U.S. will continue to play a constructive and important role in the implementation of the JCPOA," he told the conference.

U.S. Defense Secretary Jim Mattis said on Tuesday the United States should consider staying in the Iran deal unless it were proven that Tehran was not abiding by the agreement or that it was not in the U.S. national interest to do so.

Although Mattis said he supported Trump's review of the agreement, the defense secretary's view was far more positive than that of Trump, who has called the deal agreed between Iran and six world powers an "embarrassment."

<https://www.reuters.com/article/us-iran-nuclear-eu/europe-will-do-everything-to-preserve-iran-nuclear-deal-eu-diplomat-idUSKCN1C90RZ>

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Deutsche Welle (Bonn, Germany)

Russia 'ready to combine efforts' with North Korea toward peaceful solution to nuclear crisis

Author Not Attributed

September 29, 2017

Russia supported US-led sanctions against North Korea after Pyongyang's most recent nuclear test. But Russian officials have now discussed another solution with a senior North Korean diplomat in Moscow.

Russia is willing to work with North Korea on a peaceful solution to tensions sparked by Pyongyang's recent nuclear and missile tests, the Russian Foreign Ministry said after meetings between the two sides in Moscow on Friday.

"The Russian side confirmed its readiness to combine efforts in the interests of finding ways to solve the problems in the region by peaceful, political and diplomatic means," it said.

Choe Son-hui, director-general of the North American department in the North Korean Foreign Ministry, had earlier discussed the situation with Russian ambassador-at-large Oleg Burmistrov and Russian Deputy Foreign Minister Igor Morgulov.

Suspension-for-suspension

Moscow said one of the solutions discussed in the meetings was "the Russian-Chinese roadmap for a Korean settlement."

Russia and China have previously said they both support a "suspension-for-suspension" approach to reign in North Korea's missile and nuclear weapons program. The strategy calls for Pyongyang to stop its tests in exchange for an end to US and South Korean joint military exercises on the peninsula.

The US and South Korea most recently flew eight fighter jets and two bombers near North Korea in mid-September as a "routine" show of force.

Russian leaders have been particularly alarmed in recent weeks after senior US officials did not rule out armed force against Pyongyang. A public war of words between US President Donald Trump and North Korean leader Kim Jong-Un has also caused considerable concern.

Trump threatened to "totally destroy" North Korea during a speech to the UN last week. North Korean leader Kim Jong Un threatened retaliation in his response, calling Trump "mentally deranged" and a "dotard."

Russia has nevertheless agreed to US-led restrictions against Pyongyang despite Washington's approach. On September 11, Moscow voted with the rest of the UN Security Council to pass the most far-reaching sanctions ever placed on North Korea.

<http://www.dw.com/en/russia-ready-to-combine-efforts-with-north-korea-toward-peaceful-solution-to-nuclear-crisis/a-40754133>

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The New York Times (New York, NY)

Russia Destroys Chemical Weapons, and Faults U.S. for Not Doing So

By Andrew Higgins

September 27, 2017

President Vladimir V. Putin of Russia presided over the destruction of his country's last declared chemical weapons on Wednesday, describing the elimination as a "historic event" and complaining that the United States has failed to purge its own chemical arsenal.

The carefully choreographed event, broadcast on state television, cast Mr. Putin as a peacemaker and determined defender of international law. It seemed designed to offset the reputation he has acquired for belligerence and the flouting of international norms amid Russia's military interventions in Ukraine in 2014 and in Syria.

As has become customary at public appearances by the Russian president, Mr. Putin used the occasion to take a dig at Washington. He suggested that it was playing a devious double game by pushing back the American goal of eliminating its chemical arms, which is not scheduled to happen for six years.

The United States, he said, "is unfortunately not observing the deadline for destroying chemical weapons" based on treaty obligations. "They have pushed the date back three times, citing lack of budget funding. Frankly, this sounds strange, but whatever."

In Washington, a State Department official said that the United States "fully complies" with the treaty and had continued to destroy the remnants of its stockpile, which are stored in Pueblo, Colo., and Richmond, Ky. "The United States remains committed to the complete destruction of its declared chemical weapons stockpile by the end of 2023," the official said.

Both Russia and the United States — which hold the world's biggest stockpiles — were supposed to destroy all of their chemical weapons by 2012 under an international agreement, the Chemical Weapons Convention, that they each signed in 1993 and which went into force in 1997. The final deadline for the elimination of chemical weapons was initially set for 2007. But with neither of the two countries close to meeting that goal, the deadline was extended to 2012.

Neither Russia nor the United States met that new deadline either, although Mr. Putin boasted on Wednesday that Russia was three years ahead of a 2020 deadline it had set for itself.

State television showed Mr. Putin ordering officials at a destruction center in the central Russian village of Kizner to dismantle the last shells containing lethal chemical agents. The green shells, each unscrewed

by a machine in a sealed container, bore the words “Farewell, chemical weapons” painted in white in Russian.

Valery Kapashin, the head of the Russian agency responsible for the storage and destruction of chemical arms, told Mr. Putin by video link to the president’s country home outside Moscow: “Comrade commander-in-chief! The chemical weapons of the Russian Federation have now been entirely eliminated.”

Hamid Ali Rao, the deputy director of the Organization for the Prohibition of Chemical Weapons, a Hague-based body that polices adherence to the 1993 convention, declared the event “a truly momentous occasion.”

He said that it “signals the full elimination of all chemical weapon stockpiles declared by the Russian Federation.”

<https://www.nytimes.com/2017/09/27/world/europe/russia-putin-chemical-weapons.html>

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MIDDLE EAST

Foreign Affairs (Tampa, FL)

The Iranian Nuclear Deal's Sunset Clauses

By Ali Vaez

October 3, 2017

Why They Are Not a Path to a Bomb

Although the opponents of the 2015 Iranian nuclear deal often speak of Tehran in hyperbolic terms—as a “murderous regime” and as an exporter of “death and destruction”—their main criticism of the agreement is more mundane. It revolves around clauses known as the “sunset provisions,” which stipulate when the various restrictions imposed on Iran’s nuclear program expire and which critics say provide Iran with a patient pathway to acquiring nuclear weapons.

On September 19, Israeli Prime Minister Benjamin Netanyahu, one of the staunchest critics of the deal, which is known officially as the Joint Comprehensive Plan of Action (JCPOA), rebuked it yet again at a meeting of the United Nations General Assembly. “In a few years, [nuclear] restrictions will be automatically removed,” he said, “not by a change in Iran’s behavior, not by a lessening of its terror or its aggression—they’ll just be removed by a mere change in the calendar.” U.S. Secretary of State Rex Tillerson, although not known as the most hawkish on this issue in Donald Trump’s White House, echoed the same view later that day, saying, “The [deal’s] most glaring flaw is the sunset provision...We all know that this is merely a kick-the-can-down-the-road agreement.”

What Netanyahu, Tillerson, and other critics take issue with is not just that these expiration dates arrive too soon, but that there are expiration dates at all. Some of the deal’s prohibitions, such as on the number of Iran’s first-generation centrifuges and on the research and development of more advanced ones, are set to end in 2025, but Iran’s total enrichment capacity (less than a third of what it was prior to the deal) will remain where it is now until 2028, thanks to limits on Iran’s ability to enhance and deploy advanced centrifuges.

Other key limitations last even longer. Until 2030, the level of enrichment is restricted to 3.67 percent—far below the 90 percent needed for weapons-grade uranium. The path to a plutonium weapon is also blocked by the 15-year ban on constructing a new heavy-water reactor and on reprocessing spent fuel.

One of the most important restrictions, the 300 kg cap on Iran's low-enriched uranium stockpile, is in place until 2030. Iran would need 1,400 to 2,800 kg of low-enriched uranium for one nuclear weapon. This barrier renders weaponization virtually impossible until 2030.

But as the deal's detractors point out, what then?

The reality is that these fears are overblown. Some prohibitions continue past 2030. For instance, continuous surveillance of centrifuge production sites lasts until 2035, while the monitoring of Iran's uranium mines and mills goes on until 2040. During that time, if and when Iran jacks up its centrifuge production or starts moving suspect amounts of uranium, the international community will know.

Other provisions will be in place in perpetuity. For instance, Tehran is and will forever be required to notify the agency when it decides to build a nuclear facility. In contrast, under its previous safeguard agreement with the International Atomic Energy Agency (IAEA), it was only obligated to alert the international community six months before the introduction of nuclear material into the country. This was the loophole that enabled Iran to construct several undeclared nuclear facilities, which were eventually discovered in 2002 and 2009.

Assuming the other parties to the deal reciprocate by holding up their end of the bargain, Iran will ratify in 2023 the IAEA's Additional Protocol, which allows short-notice inspections of undeclared facilities in Iran and which it is now voluntarily implementing. To date, no country on earth has developed nuclear weapons under the watchful eyes of the IAEA's inspectors who are empowered by the access that the Additional Protocol affords them. And of course, under the Non-Proliferation Treaty (NPT), Iran is forever prohibited from developing nuclear weapons. Of the four recent nuclear-weapon states, three (India, Israel, and Pakistan) never signed the NPT; North Korea withdrew before moving toward nuclear weapons.

Although it is true that Iran could begin enriching uranium beyond the current 3.67 percent threshold in 2023 and will have more advanced centrifuges that will shorten the time needed to produce enough material for a nuclear weapon, without the JCPOA, Iran could start that process tomorrow. That is why scuttling the deal because of its sunset provisions is akin to committing suicide out of fear of death.

Even a better agreement will have to contain a sunset provision. All arms control deals do. The U.S. nuclear negotiating team's opening salvo, during the lengthy talks that led to the JCPOA, was a 20-year-long sunset for nuclear constraints and an extra ten years for intrusive inspections. Iranians wanted only two years. Months of negotiations led to a compromise and the timeline explained above. Even if the time frame were extended to 20 years, it would still be a sunset.

The reason Iran is treated as an exception to the rule among NPT signatories—the rest of whom are legally allowed to enrich uranium and reprocess plutonium—is its past transgressions in developing nuclear facilities without informing the IAEA and conducting research on the development of nuclear weapons. The JCPOA was premised on the logic that Iran should be subjected to years of intrusive, unprecedented inspections, through which the IAEA would gain confidence in the peaceful nature of its nuclear activities. Indeed, because of the nuclear deal, there is now more comprehensive, round-the-clock remote monitoring of Iran's nuclear sites and its one nuclear reactor than in Japan, which has 48 reactors and the largest nuclear power complex of any non-nuclear-weapons state.

Years down the road, however, when the IAEA gains confidence that there are no undeclared nuclear activities and materials in Iran, it will be unreasonable not to treat Iran like any other NPT member state

in good standing. This means that the unprecedented verification measures would end, but rigorous inspections would continue in perpetuity.

If the Trump administration cannot accept this, then its real problem is not with the provisions of the deal or Iran's compliance with them. It is, rather, either with the NPT itself or with the nature of the Iranian political system. If so, no deal would be satisfactory, unless it entails Tehran's total capitulation to U.S. demands or a regime change. Neither appears in the cards.

Undermining the existing nuclear deal with Iran in the hope of achieving an illusory one that contains permanent restrictions will do nothing to address critics' alleged concerns over the JCPOA's sunset provisions because Tehran would never accept such terms. If the United States wants longer and stronger constraints, it would be better off trying to do something that at least has a chance of succeeding—for example, marshaling international support for a plan to apply the agreement's limitations on uranium enrichment and plutonium separation either regionally or internationally for a long period of time. Washington could also encourage joint ventures for uranium enrichment and other nuclear fuel cycle activities involving other countries that would provide added assurance that Tehran's nuclear program remains civilian. Finally, the United States must live up to its obligations to the deal today in order to make any potential follow-on agreements possible tomorrow.

Undermining the Iran nuclear deal out of fear of its sunset provisions will only achieve one thing: it will bring that sunset far closer, without a realistic and achievable alternative to prevent a nuclear-armed Iran.

<https://www.foreignaffairs.com/articles/iran/2017-10-03/iranian-nuclear-deals-sunset-clauses>

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Reuters (New York, NY)

Chemical weapons watchdog found sarin used in March Syria attack: sources

By Anthony Deutsch & Michelle Nichols

October 4, 2017

An inquiry by the global chemical weapons watchdog found sarin was used in a March attack in Syria on an opposition-held town, just days before the banned nerve agent killed dozens in a separate attack nearby, sources told Reuters on Wednesday.

The March 30 air strike in the northern Syrian town of Latamneh injured around 70 people who suffered nausea, foaming at the mouth and muscle spasms.

"Samples analysis results show clear presence of sarin," a source told Reuters of the findings by the Organisation for the Prohibition of Chemical Weapons (OPCW). The report by the OPCW Syria Fact Finding Mission is due to be finalised within weeks.

The Fact Finding Mission reported in June that sarin was used in an April 4 attack on the town of Khan Sheikhoun that killed dozens of people and prompted the United States to launch missiles on a Syrian air base.

Syria agreed to destroy its chemical weapons in 2013 under a deal brokered by Russia and the United States. The Syrian government has repeatedly denied using chemical weapons during the country's more than six-year civil war.

The OPCW Fact Finding Mission is only responsible for determining if chemical weapons were used in attacks in Syria. A joint United Nations and OPCW investigation, established by the U.N. Security Council in 2015, determines who is to blame.

This team - known as the Joint Investigative Mechanism (JIM) - has already found Syrian government forces were responsible for three chlorine gas attacks in 2014 and 2015 and that Islamic State militants used mustard gas.

It is due to report to the Security Council this month on who is to blame for the April 4 Khan Sheikhoun attack.

The 15-member Security Council is due to renew the mandate for the JIM by mid-November. However, Russia has publicly questioned the work of the inquiry and some diplomats said it was uncertain if Moscow would support extending the mandate.

“The Russians don’t like what the JIM has come up with so far, so they are muttering about not allowing a rollover,” said a council diplomat, speaking on condition of anonymity.

Russian U.N. Ambassador Vassily Nebenzia declined to comment on the future of the inquiry on Wednesday.

“Renewing the U.N. Joint Investigative Mechanism now should be the Security Council’s top priority,” U.S. Ambassador to the United Nations Nikki Haley said in a statement on Wednesday.

“We owe it to the innocent people - including children - who have suffered and died at the hands of the Syrian regime to continue to push for full accountability for these horrific crimes,” she said.

U.N. war crimes investigators said in a report last month that Syrian forces had used chemical weapons more than two dozen times, including in a sarin attack on the town of Khan Sheikhoun in April that killed more than 80 people.

<https://www.reuters.com/article/us-mideast-crisis-syria-chemicalweapons/chemical-weapons-watchdog-found-sarin-used-in-march-syria-attack-sources-idUSKBN1C91XJ>

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Vet Times (Peterborough, UK)

RVC to help build biosecurity infrastructure in Middle East

By James Westgate

October 3, 2017

College principal Stuart Reid visits Jordan as part of a British delegation to help the country develop its veterinary public health.

The RVC is working with the British Government and counterparts in Jordan to build public health and biosecurity infrastructure in the Middle East.

Along with the Jordan University of Science and Technology (JUST), the college is spearheading research into some of the major health risks facing the region, including brucellosis and Middle East respiratory syndrome (MERS).

British funding

Funded by the British Government's International Biological Security programme, through the World Organisation for Animal Health, the partnership has served to share best practice in veterinary public health between Europe and the Middle East, and build capacity in terms of undergraduate and postgraduate education in veterinary medicine, scientific research and disease control.

It seeks to promote concepts of bio-threat awareness and reduction, and spread a culture of ethical science by building improved capacity for biosecurity, modern diagnostics and disease surveillance.

Lasting partnership

The partnership will also enhance capability for research on endemic and emerging diseases, support innovative academic practice and provide advice and guidance for JUST's aspirations to gain accreditation from European Association of Establishments for Veterinary Education.

Leading figures at the RVC this week (2 Oct) joined a British delegation to Jordan, where they visited the main campus of JUST in Irbid, as well as with colleagues from MERS research facilities.

This presented the opportunity for RVC principal Stuart Reid to meet his counterpart, Omar Al-Jarrah – JUST president.

'Rewarding trip'

Prof Reid said: "This was a very fruitful and rewarding trip. It was valuable for us to meet with our counterparts in Jordan and I'm delighted we were able to reaffirm the commitment of both the RVC and JUST to this important cooperative work going forward.

"I would like to thank the Jordanian government, our hosts at JUST and all involved for their hospitality and collaborative insights."

Prof Al-Jarrah added: "The RVC and JUST twinning programme is a great example of a successful collaborative international partnership between Jordan and the UK.

"This partnership aligns with the strategic goals of JUST in achieving effective international collaboration with world-class higher education institutions, such as the RVC."

<https://www.vettimes.co.uk/news/rvc-to-help-build-biosecurity-infrastructure-in-middle-east/>

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Jewish Telegraphic Agency (New York, NY)

Israeli nuclear whistleblower Vanunu invited to immigrate to Norway

Author Not Attributed

October 1, 2017

Mordechai Vanunu, who served 18 years in prison for disclosing Israeli nuclear secrets, has been invited to immigrate to Norway to live with his wife.

Vanunu married Kristin Joachimsen in Jerusalem in 2015. They met in Israel a decade earlier.

Vanunu, 62, who was released from prison in 2004, was jailed in Israel for discussing details of his work as a technician at the Dimona nuclear facility with the Sunday Times of London. He reportedly revealed Israeli nuclear secrets and gave the newspaper photographs of the plant's operations.

Under the terms of his parole, Vanunu is prohibited from leaving Israel, visiting the West Bank, approaching foreign embassies and speaking with foreign nationals.

Israel's Supreme Court has denied several appeals from Vanunu to leave the country.

Israel's Foreign Ministry said on Sunday that it is reviewing the ban on Vanunu leaving the country, but did not say if Vanunu had made an official request to leave for Norway, The Times of Israel reported.

In a September 2015 interview with Israel's Channel 2, which was approved by the Israeli military, Vanunu said he revealed the existence of Israel's nuclear weapons program "for the citizens of the world – including Israel."

<https://www.jta.org/2017/10/01/news-opinion/israel-middle-east/israeli-nuclear-whistleblower-vanunu-invited-to-immigrate-to-norway>

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INDIA/PAKISTAN

The Economic Times (Mumbai, India)

Need for dialogue among states possessing nuclear weapons: India

Author Not Attributed

September 29, 2017

India has highlighted the need for a "meaningful dialogue" among all states possessing nuclear weapons to build trust and confidence for achieving the goal of nuclear disarmament.

In a written submission to the UN General Assembly, India said it has consistently supported negotiation in the 'Conference on Disarmament' of a comprehensive nuclear weapons convention to prohibit their possession, development, production, acquisition, testing, stockpiling, transfer, and use or threat of use.

India has also separately reiterated its readiness to negotiate a convention on the prohibition of the use of nuclear weapons.

There is a need for a meaningful dialogue among all States possessing nuclear weapons to build trust and confidence and to reduce the salience of such weapons in international affairs and security doctrines," said Syed Akbaruddin, India's permanent representative at the UN.

Akbaruddin, associating himself with the Non-Aligned Movement, reiterated India's commitment to the goal of a "nuclear-weapon-free world" and the complete elimination of nuclear weapons.

India's submission made in May is part of a UN report made public yesterday. It also includes submissions of several other countries.

Five countries considered to be "nuclear-weapon states" (NWS) under the terms of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) are the US, France, Britain, Russia and China. Other states with nuclear weapons are India, North Korea, Pakistan.

In its submission, India said it is convinced that the goal of nuclear disarmament can be achieved by a step-by-step process "underwritten by a universal commitment" and an agreed multilateral framework that is global and non-discriminatory.

In its submission, India reiterated its recommendations of several specific steps to achieve the goal of nuclear disarmament.

Prominent recommendations include unequivocal commitment of all nuclear-weapon states to the goal of complete elimination of nuclear weapons and reduction of the importance of nuclear weapons in the security doctrines.

India seeks measures by nuclear-weapon states to reduce nuclear danger and calls for negotiation of a global agreement among nuclear weapon states on "no-first-use" of nuclear- weapons.

It has suggested negotiation of a universal and legally binding agreement on non-use of nuclear weapons against non- nuclear-weapon states.

Among other things India favours negotiation of a convention on the complete prohibition of the use or threat of use of nuclear weapons.

<http://economictimes.indiatimes.com/news/defence/need-for-dialogue-among-states-possessing-nuclear-weapons-india/articleshow/60883284.cms>

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Pakistan Today (Lahore, Pakistan)

Pakistan's nuclear weapons are in safe hands: Imran Khan

Author Not Attributed

September 29, 2017

Pakistan Tehreek-e-Insaf (PTI) chairman Imran Khan has said that the nuclear weapons of Pakistan are in safe hands.

In an interview with a foreign news agency on Friday, he said that rumours about Pakistan nuclear programme was a part of the western propaganda and the allegations levelled by US President Donald Trump had injured the sentiments of Pakistanis.

He said it seems that Donald Trump is unfamiliar with the history of Pakistan, adding that "it seems Trump has no knowledge of this region nor does he know the dynamics of over a decade-old war that the US is fighting in Afghanistan".

He said the existence of Taliban in Afghanistan is a reality and it would be an injustice to hold Pakistan responsible for the US defeat in Afghanistan.

He said it was China, instead of Pakistan, that rebutted Trump's statement by acknowledging the sacrifices the country had rendered as part of the war on terror. More than 70,000 Pakistanis lost their lives, thousands got injured, billions of rupees worth of loss was inflicted on Pakistan's economy, but in the end, this ["do more" claims by the US] was what the country had achieved, he said, referring to the new US strategy.

Oct 2 indictment will answer Nawaz's questions: On the other hand, PTI leader Jahangir Tareen said Nawaz Sharif would know why he was disqualified when the court will indict him on October 2.

While speaking to reporters in Lodhran, he said that the Sharif family failed to provide evidence to the Supreme Court during the one-and-a-half year, which now rules out any possibility that they would be able to provide anything.

The accountability court, hearing corruption cases against the Sharif family, said on Tuesday that the former premier will be indicted on October 2. "Sharifs have always made a deal. If they had not gone to Saudi Arabia under the deal in Musharraf's regime, then what is happening today would have happened earlier," he said.

Tareen also criticised Prime Minister Shahid Khaqan Abbasi for painting Sharif as the "actual premier" and demanded him to dissolve the assemblies.

<https://www.pakistantoday.com.pk/2017/09/29/pakistans-nuclear-weapons-are-in-safe-hands-imran-khan/>

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Hindustan Times (New Delhi, India)

Short-range nuclear weapons to counter India's 'cold start doctrine': Pakistan PM Shahid Khaqan Abbasi

Author Not Attributed

September 21, 2017

Shahid Khaqan Abbasi said that the command-and-control systems they have in place are as secure as anybody else's in the world.

Pakistan prime minister Shahid Khaqan Abbasi said on Thursday his country has developed short-range nuclear weapons to counter the 'cold start doctrine' adopted by the Indian Army.

Abbasi was also assertive of Pakistan's nuclear arsenals being safe and secure.

"We have a very robust and secure command-and-control system over our strategic nuclear assets. Time has proved that it's a process that is very secure. It's a process that has complete civilian oversight through the NCA," Abbasi said in response to a question at the Council on Foreign Relations, a top American think-tank.

The Nuclear Command Authority (NCA) of Pakistan is the authority responsible for command, control and operational decisions regarding the country's nuclear arsenals.

"As far as tactical nuclear weapons (are concerned), we do not have any fielded tactical nuclear weapons. We have developed short-range nuclear weapons as a counter to the Cold Start doctrine that India has developed. Again, those are in the same command-and-control authority that controls the other strategic weapons," he said.

Moderator David Sanger said Pakistan has the fastest growing nuclear arsenal in the world.

"There's no nuclear arsenal in the world that is growing faster. And there's no nuclear arsenal in the world, other than North Korea's, that tends to worry American more, because they worry about the safety of the arsenal. They worry about the command and control of the arsenal," Sanger said.

Abbasi said that the command-and-control systems they have in place are as secure as anybody else's in the world.

"The last 20 years are testament to that," Abbasi said in response to another question.

“So let there be no doubt that any extremist element or somebody like that can gain control of fissile material or a nuclear weapon. There is just no possibility of that. And it’s time-tested, and it’s a very secure system that has been put in place,” he said.

“Pakistan is a responsible global citizen, and we’ve shown a responsibility on the ground with this huge war on terror that we’ve been fighting for the last 15 years,” Abbasi said.

The Pakistan premier sought to dispel the notion surrounding the country’s alleged inability to handle its nuclear programmes properly.

“We do have nuclear capability. There’s no doubt about that. And we know how to handle nuclear waste. We had a nuclear program in the early ‘60s, one of the first countries in Asia to have a nuclear program. So if we’ve managed it for over 50-odd years, I think we can continue to manage it,” he said.

<http://www.hindustantimes.com/india-news/pakistan-pm-says-have-developed-short-range-nuclear-weapons-to-counter-india-s-cold-start-doctrine/story-LAZUtNffLIT33Q02WEaKJL.html>

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The Hindu (Chennai, India)

U.S. part of proliferation problem, says Pressler

By Dennis Jesudasan

October 4, 2017

Says he is not excited about the nuclear deal as there is little being done to export civilian nuclear power plants to India

In India to promote his book, Neighbours in Arms , former U.S. Senator Larry Pressler says the aim of his work was to look at the source of the weapons used by groups such as the Islamic State and countries such as North Korea and Pakistan. Much of the source had “somehow been the U.S. ... which has been a leading proliferator even though we yell and scream about Iran,” he told The Hindu .

The Pressler Amendment, he said, was a way to curb arms exports from the U.S. as “we are part of the problem”.

Mr. Pressler, 75, is known for authoring the Pressler Amendment passed in August 1985 that required the U.S. President to certify that Pakistan did not possess any nuclear weapons and to refuse foreign aid to it in the absence of such certification.

Arms sales

On India-U.S. relations, Mr. Pressler said he was not very excited about the nuclear deal as there was little being done on exporting civilian nuclear power plants to India. The Indo-U.S. ties were more to do with arms sales, which was what President Barack Obama’s previous visit was all about, he said.

Asked if the Amendment really helped curb proliferation, considering Pakistan managed to build its nuclear programme clandestinely, Mr. Pressler said, “We did some good. I admit we didn’t succeed ... but during President George H.W. Bush’s tenure, he enforced the Amendment and really shut off military and economic aid to Pakistan for a few years.”

Pakistan’s ex-Ambassador Husain Haqqani said the Amendment had nearly forced Pakistan to end its nuclear programme as it had made it too tough for them. It was only during the Reagan and Clinton administrations that the Amendment’s requirements were relinquished, he said, asserting that “neither

India nor Pakistan would have nuclear programmes today” had the Amendment been followed thoroughly. However, countries such as Brazil and South Africa were discouraged from pursuing nuclear weapons programmes because of the Amendment.

The real problem in Washington was the “Octopus” — the army of lobbyists from countries who made it difficult to enforce the Amendment. Lobbying was an issue even today, he said, adding, “Washington runs on money today ... we need a constitutional amendment to limit [funding from individuals and corporations for lobbying]. I am a co-sponsor of such an amendment.”

Asked about the U.S.’s role in Afghanistan and the fact that Defence Minister Nirmala Sitharaman had told U.S. Defence Secretary Jim Mattis that India was not keen on sending troops to that country, Mr. Pressler said, “I am a Vietnam veteran, so I have been against boots on the ground. India could do so, but the U.S. is a target for everybody.”

<http://www.thehindu.com/todays-paper/tp-national/us-part-of-proliferation-problem-says-pressler/article19793571.ece>

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AFRICA

SOFREP News (New York, NY)

United Nations report reveals North Korea has deep, shadowy connections in Africa.

By Derek Gannon

September 26, 2017

As the world settles in for another week of U.S. President, Donald Trump and North Korean dictator, Kim Jong un exchanging apocalypse laced insults in some baffling game of ‘brink-of-war’ verbal one-upsmanship. A recent United Nations Security Council (UNSC) report investigating the Democratic People’s Republic of Korea (DPRK) seemingly unfettered nuclear weapons program revealed that North Korea may have had help with its nuclear arms race from several nations within Africa.

The UNSC report which was released earlier this month stated that, “The Democratic People’s Republic of Korea has made significant technological advances in its weapons of mass destruction capability in defiance of the most comprehensive and targeted sanctions regime in United Nations history.” Along with indicating that several African and Middle Eastern nations may have colluded with the DPRK by way of natural resource and weapons trade deals that may have provided financial and material support to its nuclear program.

The UNSC report also outlined a continuing investigation into “the widespread presence of nationals of the Democratic People’s Republic of Korea in Africa and the Middle East, particularly in the Syrian Arab Republic.” Along with naming several of North Korea’s front, or dummy corporations run by North Korean intelligence agents under the command of the DPRK’s Reconnaissance General Bureau operating within the region.

So who are the players in the region.

Angola

The south-central African nation of Angola has been receiving an unknown amount of weapon shipments along with military training from North Korea for quite some time. These shipments along with DPRK military support is funneled through a North Korean front corporation known as Green Pine Associated Corporation, or “Green Pine.” Green Pine took over as the DPRK’s primary arms dealer and exporter for another North Korean front known as Korea Mining Development Trading Corporation (KOMID) after the UNSC designated them as such in early 2009.

Green Pine which is responsible for at least half of the DPRK’s arms exports specializes, among other things, in weapons of mass destruction such as nuclear and chemical weapons. And is currently upgrading Angola’s small, aging naval fleet. Angola, whose major ally in the region is the U.N. Permanent 5 (P-5) member China, has refused to respond to the UNSC investigator’s inquires into their dealings with North Korea.

Democratic Republic of the Congo

The Democratic Republic of the Congo (DRC) has been a recipient of training and weapons deals from North Korea since the Cold War. The UNSC report indicates that the Congolese government is still ignoring U.N. sanctions and is still receiving military training along with weapon shipments from the DPRK. The DRC even used the weapons they procured from North Korea on U.N. peace-keeping stability operations within the Central African Republic. The DRC’s long-time regional ally, China which has several hydroelectric and infrastructural improvement contracts within the Congo borders and enjoys strong Sino-Congo relations is looking to improve the two countries economic footprints. The Congolese government also declined to answer the UNSC inquires as well.

Mozambique, United Republic of Tanzania

Mozambique reportedly funneled \$6 million dollars through the North Korean front corporation known as the, Haegeumgang Trading Corporation several Russian-made Pechora-2M S-125 surface-to-air (SAM) missile systems, and unknown number of man-portable surface-to-air defense (MANPAD) systems, along with a plan to refurbish its aging Russian-made T-55 main battle tanks. The Tanzanian government also was found to have dealings with Haegeumgang Trading Corporation and paid out close to \$12 million dollars for the refurbishing and upgrading of its Pechora-2m S-125 SAM batteries along with a brand new P-12 early warning air defense radar system.

Both of these African countries enjoy a robust financial and infrastructural development program with China. Mozambique and China currently have upwards of 52 different finance and agricultural projects underway as well as solid import/export trade deals and was named China’s hottest tourist destination. Tanzania also enjoys the same, with China deeply rooted into the country’s financial markets and revitalizing its struggling coal industry with close to a \$400 million dollar loan.

Eritrea

In late July 2016, a shipment bound for Eritrea from the Chinese trading company known as Beijing Chengxing Trading Co. Ltd was intercepted after an anonymous tip from what the UNSC is calling an “unknown State Member” of the security council indicated that the shipment was that of North Korean military equipment. After U.N. inspectors searched the over 45 boxes, it was determined that the shipment was that of military grade radio communications, GPS equipment, and high frequency cryptographic radio transmission stations.

The shipment was destined for the Eritrean based company known as Eritech Computer Assembly & Communications Technology PLC by way of the Malaysian based Global Communications Company

(Glocom). The trouble is, Glocom is another North Korean front company and used China's Beijing based trading company as either a witting or unwitting proxy to ship military equipment to Eritrea illegally.

China and Eritrea also have a few infrastructural development projects ongoing within the region, to include a \$23 million dollar project to improve Eritrea's communications infrastructure. China even offered to put Chinese troops along the contested Eritrean-Djibouti border as peace-keepers after it opened its first overseas base in the Obock region of Djibouti earlier this year under its Belt and Road Initiative. Eritrea joined with the rest of the African nations under suspicion and have also refused to answer any of the UNSC inquiries into this shipment.

Did these deals brokered in the shadows, using front companies assist North Korea in fast forwarding its nuclear proliferation goals, perhaps. It certainly provided the monetary gains that could have helped in the purchase of larger or more sophisticated technology to further its quest for the bomb. The bigger, scarier question is, did China, and maybe even Iran, use these African countries as a sort of proxy to shuttle the vital pieces North Korea needed to fulfill that quest.

<https://sofrep.com/90544/united-nations-report-reveals-north-korea-has-deep-shadowy-connections-in-africa/>

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Daily Post (Abuja, Nigeria)

Nigeria reaffirms Africa's commitment to nuclear weapons-free world

Author Not Attributed

October 4, 2017

Nigeria has pledged Africa's support to the non-proliferation of Weapons of Mass Destruction mass (WMD), saying a world free of nuclear weapons is the ideal society it envisaged.

Prof. Tijjani Bande, Nigeria's Permanent Representative to the UN, delivered this position on behalf of the African Group at the 72nd Session of the UN General Assembly General debate on disarmament and international security.

The Nigerian envoy said: "The continued existence and possession of nuclear weapons do not guarantee security but an affirmation of the risks of their potential use.

"Our world, including the outer space, must be free of nuclear weapons and other weapons of mass destruction.

"It is in this context that the African Group stresses the need for the nuclear weapons States to cease their further modernisation, upgrading, refurbishment, or extending the lives of their nuclear weapons and related facilities".

Bande said the African Group sought more profound and concrete measures in pursuit of the objective of nuclear disarmament, as the international community awaits the realisation of the goal of the total elimination of nuclear weapons

The Nigerian Ambassador said: "Seven decades have passed since the world witnessed the first ever use of atomic bombs in Hiroshima and Nagasaki.

"The devastations and impact caused by the twin attacks continue to be borne, not only by the Hibakushas but also by all peoples around the globe, including the impact on the environment.

“Therefore, the time has come for the world to speak with unanimity towards ensuring a world free of nuclear weapons and all other weapons of mass destruction.

“It is also the moment to raise our voices against the slow pace and the lack of good faith and commitment on the part of nuclear weapon States to dismantle these weapons.”

According to him, the threat posed to humanity by the continued existence of nuclear weapon is real.

“In this regard, the African Group insists on the implementation of all agreed measures and undertakings by the nuclear weapons States in the context of the Nuclear Non-Proliferation Treaty (NPT).

Bande said the African Group re-affirmed the central role of nuclear-weapon-free zones in the consolidation of the NPT, as well as in their contributions to addressing nuclear disarmament and non-proliferation across all regions of the world.

The Nigerian envoy said: “In this context, the African Group remains committed to the Treaty of Pelindaba.

“Among other things, the Treaty re-affirms the status of Africa as a nuclear-weapon-free zone and provides a shield for the African territory.

“This includes preventing the stationing of nuclear explosive devices on the continent and prohibiting the testing of those weapons on the entire space that constitutes the African continent.”

The African Group also emphasised the need for humanitarian considerations in the context of all deliberations on nuclear weapons.

He particularly expressed the serious concern of the Group over the catastrophic humanitarian consequences of the use or detonation of nuclear weapons, either by accident or as a deliberate action.

He said the African Group continued to call on all States, particularly nuclear weapons States, to have in their consideration, the catastrophic humanitarian consequences of the use of these weapons.

Bande said the humanitarian consequences included “on human health, the environment and vital economic resources.

“It is in this context that the Group strongly supports all efforts aimed at the total elimination and de-legitimisation of nuclear weapons, including the NPT.

“The African Group remains deeply concerned over the illicit trade, transfer, manufacture, possession and circulation of small arms and light weapons, their excessive accumulation and uncontrolled spread in many regions of the world, particularly on the continent of Africa.

“The Group remains committed to the UN Programme of Action to Prevent, Combat and Eradicate the Illicit Trade in Small Arms and Light Weapons (SALWs) in All Its Aspects,” Bande said. (NAN)

<http://dailypost.ng/2017/10/04/nigeria-reaffirms-africas-commitment-nuclear-weapons-free-world/>

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GhanaWeb (Amsterdam, Netherlands)

Africa committed to nuclear-free world – Akufo-Addo

Author Not Attributed

September 22, 2017

President Akufo-Addo said Thursday that Africa is committed to be nuclear weapon free.

Addressing the UN General Assembly in New York, he declared, “Africa, and, indeed, Ghana, remains committed to remaining a nuclear weapon-free continent.”

“Three weeks ago, highly-enriched uranium was flown out of Ghana back to China, signalling the end of the removal of all such material from the country. Our nuclear reactor has, subsequently, been converted to use low-enriched fuel for power generation. A world, free of nuclear weapons, must be in all our collective interest,” he added.

Reaffirming Ghana’s commitment to maintaining friendly and cordial relations with all countries and peoples of the world, he said: “The full engagement of Ghana, through the Economic Community of West African States (ECOWAS), in the process of West African integration, and through the African Union (AU), in the process of African integration, remains a goal of my government.

“Regional and continental integration are in Ghana’s interest, as they represent one of the surest ways towards establishing the conditions for prosperity in our region and on the continent in the decades ahead, as well as helping to ensure peace and security and combating the scourges of terrorism, extremism and intolerance.

“The conflicts that continue to plague our continent in Libya, South Sudan, Congo DRC, and Mali, would be more effectively resolved if the international community was to support, not undermine, the efforts of our regional and continental organisations to deal with them.

Ghana will also continue to be active in the multilateral organisations to which we belong, such as La Francophonie, the Commonwealth of Nations, and this United Nations, because we believe multilateral action and international co-operation are in the interest of all of us.”

<https://www.ghanaweb.com/GhanaHomePage/NewsArchive/Africa-committed-to-nuclear-free-world-Akufo-Addo-583867>

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COMMENTARY

Defense One (Arlington, VA)

Why Tactical Nuclear Weapons Are Still A Thing

By Albert J. Mauroni

October 4, 2017

In the debate over low-yield nukes, opposing camps are largely talking past each other. Here are some thoughts about why they remain necessary.

Michael Krepon recently published an article in Defense One in which he called the potential development and employment of tactical nuclear weapons “unwise” and strategically unsound. His

argument includes several statements that illustrate the yawning chasm between arms control experts and military planners today when it comes to the subject of the utility of nuclear weapons. As is often the case, he uses illustrations and questionable statements that date to the Cold War to discuss the contemporary challenge of nuclear modernization. Here are some thoughts as to why tactical nuclear weapons are being advanced as a valid, contemporary — and necessary — defense capability.

Krepon states that “the U.S. Army reached the conclusion that it’s folly to use tactical nuclear weapons in a land battle.” That’s not quite true – President George H.W. Bush decided that the U.S. Army should give up its tactical nuclear weapons in 1991, in part due to concerns from NATO allies as to their deployment in Europe and in part due to Congressional political views at the time. But the idea that the U.S. Army thought that “tactical nuclear weapons get in the way of U.S. soldiers” is belayed by decades of field manuals, operational plans, and leadership testimony supporting the offensive use of nuclear weapons and continued interest today by the U.S. Army in supporting nuclear weapons planning. If the U.S. Army were allowed to develop tactical nuclear weapons, I’m very sure its leadership would do so.

Much of this debate is unnecessarily confused by the very term “tactical.” Many serious people, to include advocates of the DoD nuclear enterprise, claim that there is no such thing as tactical nuclear weapons. Gen. John Hyten, commander of U.S. Strategic Command, has said, “I think every nuclear weapon that is employed is strategic.” And of course, the impact of any nuclear weapon is felt at the strategic level of national leadership, but certainly the offensive use of nuclear weapons, delivered by “short-range” military systems (within a theater of operations) to achieve limited operational (military) goals is the very purpose of tactical nuclear weapons. The State Department at the least understands that “non-strategic nuclear weapons” – the formal name for tactical nuclear weapons – are a category distinct from strategic nuclear forces, and acts accordingly.

Krepon goes on to claim that nuclear weapons advocates claim “that small mushroom clouds are better than big mushroom clouds,” that “the point of deterrence is to have no mushroom clouds.” No respected academic lecturer or military planner would agree to this oversimplification. The point of deterrence is to have a credible means of military force to threaten an adversary into not pursuing a particular course of action. Taken to an extreme, successful deterrence does mean no mushroom clouds, large or small. But successful deterrence is impossible without a credible capability, and eliminating tactical nuclear weapons could result in the U.S. government self-detering itself from using larger nuclear weapons in a future crisis against another nuclear-weapons state.

And for the arms control community, that’s acceptable. That’s a desired outcome, not a limitation. However, that’s a luxury in which other nuclear-weapon states, including Russia, China, India, and Pakistan, refuse to indulge. Given that the possibility of other adversaries using tactical nuclear weapons, can the United States rely on conventional weapons alone to deter their use against U.S. national security interests? Given that the overall size of the military force has shrunk over the years and that the U.S. military is increasingly involved in numerous conflicts all over the globe, can it afford to not invest in low-yield nuclear weapons and delivery systems designed to operate in a specific theater?

This is a long-running debate that will not be solved today or in the near future. It’s occurring today because a new administration has taken charge of national security matters, because funding for a new generation of nuclear delivery systems is underway, and because of concerns of proliferation in Northeast Asia. These are understandable concerns. But the debate over the utility of new low-yield nuclear weapons increasingly involves two main bodies talking past each other.

The arms control advocates repeatedly say that a low-yield nuclear weapon capability already exists within the B61 family of nuclear bombs, that modernizing this capability is both too expensive and contrary to the spirit of the Nuclear Nonproliferation Treaty, and that U.S. conventional capabilities are

“good enough” to deter future crises against nuclear-weapon states other than Russia and China. The nuclear weapons advocates point out that the B61 uses a very old design and low-yield options are desired in the cruise missile variant, that the Defense Department has successfully developed a defense budget that includes nuclear modernization and that will be accepted by the White House and Congress, and that conventional capabilities – no matter how superior – are an inadequate response to another nation’s nuclear saber-rattling. Neither side will change their talking points anytime soon.

This is not to say that there cannot be a common road between the two diametrically-opposing viewpoints. The arms control advocates may never see a treaty or actions to rid the world of tactical nuclear weapons, as long as nation-states see advantages to their existence. The nuclear weapons advocates may never see the resumption of nuclear testing to validate new weapon designs. But modernizing the B61-series of bombs and designing a Long-Range Standoff cruise missile may permit further reductions in the U.S. nuclear stockpile. And it may well save money to allow the National Nuclear Security Administration to design a new physics package for a low-yield nuclear weapon, rather than limiting research and development to wringing out life extension programs for existing nuclear warheads every few years.

The fact remains that a deliberate process is in place. The National Security Council develops national policy objectives that include deterrence goals. The military develops and validates requirements for new military requirements for nuclear weapons, in line with State Department guidance on strategic force limits. Plans and concepts are developed to be effective, legal, and proportional. The annual budget cycle is well-established and balanced (as best as one can) among multiple stakeholders. Congress oversees the development and employment of strategic forces and vigorously questions the nuclear advocates. The academic community debates and informs the national security enterprise and Congress on the soundness of their policies and plans. The process works, but not to the ends of the arms control community alone.

Colin Gray once noted, in his book “Weapons Don’t Make War” (Univ Press of Kansas, 1993), that the absence of experience with nuclear conflict had resulted in the “fashionable judgment” that the only positive utility for nuclear weapons in the pursuit of statescraft was in their nonuse. He called out those who believed that any nuclear use option carried an unacceptable risk of uncontrollable escalation as “strategically illiterate.” As long as there are nation-states fearing for their security, there will be the challenge that nuclear weapons will be developed in the pursuit of national security objectives. Focusing the argument on the type of nuclear weapon ignores the real debates on how strategic deterrence policy is developed – in today’s terms, not that of the Cold War – and how the U.S. government pursues regional stability across the globe.

The Korean Peninsula offers an opportunity for the current debate on nuclear weapons employment. Krepon misses the point on U.S. actions in the region – U.S. bomber flights are not necessarily designed to deter Kim Jong Un, but rather to assure the South Korean and Japanese public. No one is seriously talking about returning tactical nuclear weapons to the Peninsula. But at the same time, the U.S. government requires options to effectively respond to the potential threat of North Korea’s growing nuclear arsenal. The ICBMs and SLBMs were not designed to be that option. A low-yield nuclear weapon is a must-have, not a luxury.

<http://www.defenseone.com/ideas/2017/10/why-tactical-nuclear-weapons-are-still-thing/141540/?oref=d-river>

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RealClear Defense (Chicago, IL)

Finish the MOX Project

By Jerry Paul

October 3, 2017

Converting Weapons Grade Plutonium for Nuclear Fuel Use Makes Sense for America

Recent headlines announcing the cancellation of two new commercial nuclear reactors under construction at the V.C. Summer station near Columbia, South Carolina will cost thousands of jobs and billions in economic benefits. That is bad news for the state and worse news for America's long-term energy portfolio and resilience.

But there is another major nuclear facility under construction in South Carolina employing some 2,000 workers, which when completed will benefit America's national security and provide affordable fuel for existing nuclear power plants. Designed to convert weapons-grade nuclear plutonium into mixed-oxide (MOX) fuel for nuclear plants, the MOX Project is more than 70 percent complete. However, some politicians and bureaucrats in Washington have worked to cancel the project, even at this late stage and with no real alternative.

Completing the MOX Project is vitally important for America's nuclear energy industry which has seen plants around the country close prematurely resulting in lost American jobs and a loss of an emission-free electricity supply. As our own nuclear supply chain atrophies, international rivals like China and Russia, surge ahead. We simply must demonstrate we can build and complete significant nuclear projects or America will lose its global leadership in this technology.

Maintaining our lead in nuclear energy technology has another important national security implication – think here about submarines and space exploration. The MOX Project has special significance in making America safer – it is the product of a US-Russia agreement in 2000 to eliminate surplus weapons-grade plutonium to ensure material could never be a target for theft by terrorists and neither country could ever reuse it in new nuclear weapons.

President Obama's Department of Energy proposed canceling construction for political reasons and tried switching to a new plan to dilute the plutonium and store it in an underground repository. But that idea is not a realistic alternative to the MOX Project. The facility proposed by the previous administration for storing the material was never designed for this purpose and has been closed for most of the past two years.

Work on MOX has been an asset for the U.S. nuclear manufacturing supply chain, its scientists, and engineers. It has helped rebuild our nuclear technology bench strength and providing real-world experience for nuclear engineers and other technical professionals. While the MOX Project has had its challenges, a strong endorsement for completing it along with the promise of steady funding will help the contractors finish the project more quickly and efficiently.

The many changes to the scope, design, and funding levels have created major stumbling blocks for the companies working on the project. Further, some bureaucrats in Washington have even tried to hobble it because of ideological or political motivations.

Amazingly, the project has made significant progress and continues to advance. And it is based on proven technology – a MOX fuel plant using similar technology has operated in France for decades. Despite the setbacks, the workers there have focused on safety and received the highest possible rating from the U.S. Nuclear Regulatory Commission seven years in a row.

South Carolina Gov. Henry McMaster and most of the state's leaders support completing the MOX Project and are pressing their case with the Trump administration. However, if you are one of the thousands of employees, contractors or local businesses concerned about the future of the MOX Project or the other American nuclear projects in limbo, you could use some good news.

President Trump has said that he is committed to reviving the American nuclear industry. Completing the MOX Project checks all the boxes: it supports thousands of high-skilled jobs, helps keep America's nuclear industry competitive, and contributes to our national security. The President and Secretary Perry could boost our nuclear supply chain by announcing their full support for completing the MOX Project. This would truly help make American nuclear technology great again.

https://www.realcleardefense.com/articles/2017/10/03/finish_the_mox_project_112423.html

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Stockholm International Peace Research Institute (Stockholm, Sweden)

The forgotten science of cooperative threat reduction

By Ian Anthony

October 3, 2017

The announcement that Russia had completed the destruction of its chemical weapons stockpile was rightly applauded as a milestone in multilateral arms control. However, it was also a reminder of the significant part that international non-proliferation and disarmament assistance played in facilitating the implementation of the 1993 Chemical Weapons Convention (CWC).

Historically, the parties to arms control agreements were expected to meet their obligations using their own technical and financial resources. After the end of the cold war, there was a window of time in which states recognized that if those resources were lacking, there was a shared interest in cooperating to implement agreements. International partnerships helped turn diplomatic success into real disarmament.

From a bilateral Russian–US programme of work to secure nuclear weapons in turbulent post-cold war conditions, cooperative threat reduction evolved into collaboration to implement the 1991 Treaty on Reduction and Limitation of Strategic Offensive Arms (Strategic Arms Reduction Treaty, START I) and the CWC. Later, the approach was applied by a wider group of partners to reduce the safety, security and environmental consequences of cold war militarization. States pooled their money, technology and equipment to facilitate practical projects that none of them could undertake individually.

The elimination of Russian chemical weapons is an illustration of the ways in which European countries contributed to disarmament, in partnership with Russia. For example, Germany was heavily engaged with design work at chemical weapon destruction facilities and delivered a lot of the key equipment needed at an elimination site—such as a draining system for munitions, an incinerator, an evaporator, fire safety equipment and filters. The European Union played its part, paying for filters provided.

Foreign citizens did not have access to the most sensitive parts of destruction facilities, and Russian facility design and techniques were applied during the process. The close collaboration is a useful reminder that states can work effectively together to achieve a shared disarmament objective, without compromising what they regard as security-sensitive information.

After 2009, the political momentum behind cooperative threat reduction with Russia dissipated, although the legacy problems of the heavily militarized Soviet Union are still far from being solved.

However, the effects of what was achieved will be long-lasting, and not only in relation to chemical weapons. As Russia reduced the number of nuclear weapons in its arsenal, the material released from warheads has been stored in facilities where international assistance enhanced security by providing cameras, sensors, gates, access control cards, perimeter fencing and security lighting. Almost 200 nuclear-powered submarines from the Soviet/Russian Navy's Northern and Pacific fleets have been cut into sections after decommissioning. For the next 70 years, the separated compartments will sit in storage facilities on land, constructed using cranes and heavy equipment supplied by European countries.

If a period of fewer arms control agreements and a build-up of armaments is on the horizon, it is to be hoped that the lessons of cooperative threat reduction will be preserved, ready for a time when they might once again be needed in Europe or in another world region.

<https://www.sipri.org/commentary/expert-comment/2017/forgotten-science-cooperative-threat-reduction>

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The New York Times (New York, NY)

Inside North Korea, and Feeling the Drums of War

By Nicholas Kristof

October 5, 2017

To fly into North Korea on an old Russian aircraft is to step into an alternate universe, one in which “the Supreme Leader” defeats craven American imperialists, in which triplets are taken from parents to be raised by the state, in which nuclear war is imminent but survivable — and in which there is zero sympathy for American detainees like Otto Warmbier.

Warmbier was the University of Virginia student who was arrested for stealing a poster, then sentenced to 15 years of hard labor and eventually returned to the U.S. in a vegetative state.

“He broke the law in our country,” said Ri Yong-pil, a senior Foreign Ministry official, adding that Warmbier was returned (a week before his death) as a “humanitarian” act. Another senior ministry official, Choe Kang-il, insisted that North Korea had provided excellent care and spent “all the money for nursing” him.

Something in me snapped. I asked how North Koreans could possibly boast about their spending on a young man when he was in a coma only because of them. Choe replied just as hotly that Warmbier had not been mistreated and was in fine condition when he was sent back home.

“The U.S. administration, or some people with a certain intention, let him die,” Choe said. “This must be intended to foster and spread anti-Communist hatred within America.”

Officials offered no apology and gave no ground, reflecting a hard line toward the United States that I found everywhere on this visit; Choe derided President Trump as “a crazy man,” “a thug” and “a pathetic man with a big mouth.” I’ve been covering North Korea on and off since the 1980s, and this five-day trip has left me more alarmed than ever about the risks of a catastrophic confrontation.

I was given a visa to North Korea, as were three other New York Times journalists. The U.S. State Department promptly gave us an exemption from the travel ban to North Korea and issued special passports good for a single trip here.

Far more than when I previously visited, North Korea is galvanizing its people to expect a nuclear war with the United States. High school students march in the streets in military uniform every day to denounce America. Posters and billboards along the public roads show missiles destroying the U.S. Capitol and shredding the American flag. In fact, images of missiles are everywhere — in a kindergarten playground, at a dolphin show, on state television. This military mobilization is accompanied by the ubiquitous assumption that North Korea could not only survive a nuclear conflict, but also win it.

“If we have to go to war, we won’t hesitate to totally destroy the United States,” explained Mun Hyok-myong, a 38-year-old teacher visiting an amusement park.

Ryang Song-chol, a 41-year-old factory worker, looked surprised when I asked if his country could survive a war with America. “We would certainly win,” he said.

These interviews were conducted in the presence of two Foreign Ministry officials, but even if they weren’t, there is no chance that ordinary people would speak freely to a foreign reporter. This is perhaps the most tightly controlled country in the world, so such quotes should be seen as reflecting a government script — in this case, a disturbingly jingoistic one.

On past trips (my last was in 2005), we journalists stayed at hotels in the capital and were free to walk around on our own, but this time the Foreign Ministry housed us at its own guarded Kobangsan Guest House east of the capital. At first I thought this was simply to restrict us, but increasingly I saw signs of something more interesting and menacing: The Foreign Ministry was also protecting us from hard-liners in the military or in the security services.

“Someone might hear you are from America,” and there could be trouble, one official explained.

Hard-liners seem to have gained greater power this year, especially after Trump’s threat to “totally destroy” North Korea, and we were told that military officers sometimes mock their own country’s diplomats for being wimpish “American cronies.”

Foreign Ministry officials escorted us every time we left the compound, probably both to keep us out of mischief and to protect us from the security agencies.

Yes, all this has been a little discomfiting.

The upshot is that I have felt more constraint than on past visits to North Korea, and considerably more tension. Before, I had been able to see senior generals, but this time the military flatly refused to consider my interview requests. The security forces also refused my request to meet the three Americans whom they still detain, one for two years now, without consular access.

A basic problem is that hard-liners seem ascendant in both Washington and Pyongyang.

In Washington, Secretary of State Rex Tillerson is advocating a diplomatic resolution to conflict with North Korea — but Trump undercut him on Twitter last Sunday and said Tillerson was “wasting his time.” Trump’s policy toward North Korea is founded on false assumptions that the Supreme Leader, Kim Jong-un, will give up his nuclear weapons, that China can save the day and that military options are real.

In Pyongyang, North Korea’s capital, which is full of wide streets and monumental buildings, officials also express little interest in the kind of tough compromises that would be necessary to resolve the crisis.

“The situation on the Korean Peninsula is on the eve of the breakout of nuclear war,” Choe, the Foreign Ministry official, told me. “We can survive” such a war, he added, and he and other officials said that it was not the right time for talks with the U.S.

The North Koreans insist that the U.S. make the first move and drop its sanctions and “hostile attitude” — which won’t happen. And the U.S. is equally unrealistic in insisting that North Korea give up its entire nuclear program.

I told Choe that my visit gave me a sense of *déjà vu*, reminding me of a trip to Saddam Hussein’s Iraq on the eve of the American invasion. The difference is that a war here would be not just a regional disaster but a nuclear cataclysm.

Choe was unimpressed by my warning. He said that Iraq and Libya had made the mistake of giving up their nuclear programs; in each case, America then ousted the regime. He added that the lesson was obvious, so North Korea will never negotiate away its nuclear warheads.

Still, for all the shadow of possible war, North Korea has had some positive changes. The famine is over (although malnutrition still leaves one in four children stunted), the economy has developed and government officials are far more open and savvy than a generation ago.

Officials used to deny that there was ever any crime in North Korea — but now they freely concede that this country has thieves, that young women sometimes become pregnant before marriage, that inevitably there’s a measure of corruption. (They do deny that North Korea has any gay people.)

North Korea is no longer hermetically sealed, and South Korean pop music and soap operas are smuggled in on flash drives and DVDs from China (watching them is a serious criminal offense). There is also an intranet — a rigidly controlled domestic version of the internet — and students learn English from about the third grade. At the best schools, like Pyongyang No. 1 Secondary School, the students are extraordinarily bright and they conversed with us in fluent English, with far more sophistication than on my first visit to the same school in 1989.

Yet this is still North Korea. I asked these kids if they had ever heard of Beyoncé or the Beatles; none had. I asked if they had heard of Facebook. One had, because computer software sometimes referred to it, but he didn’t know what it was.

Radios or televisions that might get foreign broadcasts are illegal, and there is no access to the internet except for foreigners and senior officials. When I arrived at the airport, my luggage was closely searched for pernicious publications, and even my phone was examined.

“Who’s this person,” the customs official asked suspiciously when she saw an Asian woman appear frequently in my photos.

“My wife,” I explained.

“Oh,” she said, deflated. “She’s pretty.”

Each home or village has a speaker, a link from Big Brother, that drums in propaganda each morning. Religion and civil society are not allowed. Government controls frayed during the terrible famine of the 1990s, when perhaps 10 percent of the population died, but the controls have returned with the economic recovery. This is the most totalitarian state in the history of the world, because it has computers, closed-circuit cameras, mobile phones and other monitoring technologies that Stalin or Mao could only have dreamed of.

North Korea is also sometimes simply weird. Triplets are taken from their parents and raised by the state because they are considered auspicious. The personality cult is unyielding, with every adult wearing pins of “the Great Leader,” Kim Il-sung, who died in 1994, or his son, “the Dear Leader,” Kim Jong-il, who died in 2011, and their portraits are in every home, every factory, every classroom.

Every year, people die trying to rescue the Kim portraits from house fires (whether because of genuine loyalty or to win credit with the authorities), and now this Confucian-style reverence is directed to Kim Jong-un, 33, the scion of the dynasty. His name means “just and merciful,” and the state media are worshipful about his “brilliant intelligence, military acumen, matchless courage and outstanding art of command,” as one publication put it.

Do people really believe this stuff?

I’ve interviewed countless defectors over the years, and they say that there’s more disenchantment among the youth and in the China border area, where Koreans realize that their country has been left behind. But the defectors add that many North Koreans, especially older ones and those distant from the China border, genuinely believe in the system and worship the Kim family — because they know nothing else.

“Much of the older generation still remains loyal to the regime,” agreed Jieun Baek, author of a recent book on how information reaches North Koreans. Attitudes are changing among younger people and those involved in the market economy, she said, but she doesn’t foresee a grass-roots uprising any time soon.

What makes this moment so perilous is that North Koreans are steeped in the idea that they have repeatedly defeated the U.S. — and can do so again. Every single person we spoke to, from officials to students, voiced certainty that if war breaks out, America will end up in ashes and the Kim regime will emerge victorious.

“U.S. pride will be squished,” predicted Jo Yong-myong, a 20-year-old university student, who thinks war is likely. “The big nose of the U.S. will be cut off.”

Maybe Kim himself isn’t so recklessly overconfident. But historically, one risk is that dictators come to believe their own propaganda.

For a glimpse of the state narrative, I visited the huge new museum in Pyongyang that Kim built for the Korean War. It flatly asserts the standard North Korean line that American imperialists started the war in 1950 by invading the North, rather than (as historians say) that the North started it by sending soldiers into South Korea, and it says that American atrocities in Korea were worse than those of Hitler. “They killed Korean people for their pleasure,” First Lt. Jang Un-hye, 24, our military guide in the museum, told me as she led me by an exhibit devoted to American use of biological weapons in the war (most historians say this is a fabrication).

One hall in the war museum, called “Defeat of the U.S.,” showed a huge diorama with an American soldier’s corpse being picked at by crows, with the sound of their caws filling the room.

Next to the museum is the Pueblo, the American Navy ship seized by North Korea in 1968 — another victory by the Korean People’s Army over the American imperialists! At the border with South Korea is a museum displaying the ax used to kill two American soldiers there in 1976, also presented as a triumph.

Somehow for all the official hostility, North Koreans tend to be friendly to individual Americans. At the new science and technology tower in Pyongyang, I met a 13-year-old boy, Paek Sin-hyok, who daily participates in military parades at his middle school to mobilize for war. It was his first time meeting Americans, and he said his heart was thumping. I asked about the common North Korean expression that “just as a wolf cannot become a lamb, so an American imperialist can never change his aggressive nature.”

“What about us?” I asked him. “Are we wolves? Or lambs?”

He struggled with how to answer that politely. “Half and half,” he said.

With this mutual distrust, it’s easy to see how things might go wrong. I suspect North Korea is rational and cares about self-preservation, and I don’t believe that it would fire off a nuclear missile at Guam or Los Angeles just for the thrill. But a dogfight between a North Korean and an American plane could cause a crisis that escalates. Or Trump could order an airstrike on a North Korean missile during fueling on the launchpad — and that, every North Korean official said, would lead to war.

Both sides are on a hair trigger. That’s why in war games, conflicts quickly escalate — and why the American military estimated back in 1994 that another Korean war would cause one million casualties and \$1 trillion in damage. Today, with the possibility of an exchange of nuclear weapons, the toll could be far greater: One recent study suggested that if North Korea detonated nuclear weapons over Tokyo and Seoul, deaths in those two cities alone could exceed two million.

My sense is that both sides are fearful of appearing weak and are trying to intimidate the other with military bluster, but that each would prefer a peaceful resolution — yet doesn’t know how to get there politically. So how do we get out of this mess?

First, Trump should stop personalizing and escalating the conflict. Second, we need talks without conditions, if only talks about talks: I’d suggest a secret visit to Pyongyang by a senior administration official, as well as discussions with North Korea’s ambassador to the United Nations. Third, human rights have to be part of the agenda, backed by the threat of suspending North Korea’s credentials at the United Nations. Fourth, we should support organizations that smuggle information on USB drives into North Korea; this would be cheap and might contribute to change in the long term. Fifth, increase cyberwarfare, which the U.S. has already used effectively against North Korea. Sixth, let’s enforce tighter sanctions, but only if harnessed to a plausible outcome.

Ultimately, the best hope that is realistic may be a variant of what’s called a “freeze for a freeze,” with North Korea halting its nuclear and missile tests in exchange for a reduction in sanctions and in U.S.-South Korean military exercises — as an interim step, preserving the long-term goal of denuclearization. Unfortunately, both sides resist this approach; I was disappointed in the lack of North Korean interest.

So if we can’t work out a freeze for a freeze, realistically the next best option is to settle into long-term mutual deterrence. But that would be risky, not least because we have an American president and a North Korean leader who both seem impetuous, overconfident and temperamentally inclined to escalate any dispute — and the American mainland increasingly will be in the cross hairs of North Korean nuclear warheads.

I leave North Korea with the same sense of foreboding that I felt after leaving Saddam’s Iraq in 2002. War is preventable, but I’m not sure it will be prevented.

<https://www.nytimes.com/2017/10/05/opinion/sunday/nuclear-north-korea.html>

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ABOUT THE USAF CUWS

The USAF Counterproliferation Center 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 Director for Nuclear and Counterproliferation (then AF/XON), now AF/A5XP) and Air War College Commandant established the initial manpower 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.

The Secretary of Defense's Task Force on Nuclear Weapons Management released a report in 2008 that 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." As a result, 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 continuing education through the careers of those Air Force personnel working in or supporting the nuclear enterprise. This mission was transferred to the Counterproliferation Center in 2012, broadening its mandate to providing education and research to not just countering WMD but also nuclear deterrence.

In February 2014, the Center's name was changed to the Center for Unconventional Weapons Studies 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.

The CUWS'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.