CHEMICAL WEAPONS CONVENTION (CWC)

Workers Begin X-rays of Mustard Rounds at Blue Grass Army Depot

Lexington Herald-Leader, 10 May 2011, www.kentucky.com

Workers began X-raying a random sample of 155mm mustard rounds Monday at Blue Grass Army Depot in Madison County. *(565 words)* ***Click here for full text.***

Chemical Weapons Destruction in Utah Ahead of Treaty Deadline

Deseret News, 13 May 2011, www.deseretnews.com

The final large container of mustard gas in the stockpile at the Deseret Chemical Depot is scheduled for incineration on Monday. *(358 words)* ***Click here for full text.***

Disposal Facility Destroys Last Mustard Agent-Filled Bulk Container

U.S. Army Chemical Materials Agency, 17 May 2011, www.cma.army.mil

Workers at the Tooele Chemical Agent Disposal Facility (TOCDF) yesterday destroyed the last of 6,399 mustard agent-filled bulk containers originally stored at the U.S. Army's Deseret Chemical Depot (DCD). *(427 words)* ***Click here for full text.***

COMPREHENSIVE NUCLEAR TEST-BAN TREATY (CTBT)

NNSA Begins New Campaign of Verification Experiments at Nevada National Security Site

National Nuclear Security Administration (NNSA), 04 May 2011, nnsa.energy.gov

The NNSA today announced that it has successfully conducted the first of a new kind of experiment aimed at improving arms control and nonproliferation treaty verification. *(384 words)* ***Click here for full text.***

The Case for the Comprehensive Nuclear Test-Ban Treaty [EXCERPT]

U.S. Department of State, 10 May 2011, www.state.gov

Remarks by Ellen Tauscher, Under Secretary for Arms Control and International Security at the Arms Control Association Annual Meeting at the Carnegie Endowment for International Peace

President Obama vowed to pursue ratification and entry into force of the CTBT in his speech in Prague. *(1,505 words)* ***Click here for full text.***

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CONVENTIONAL ARMED FORCES IN EUROPE TREATY (CFE)

Hungarians Inspect Wing for Treaty Compliance

Military Aerospace, 04 May 2011, www.militaryaerospace.com

The 52nd Fighter Wing [FW] was the subject of two treaty compliance [inspections] by Hungarian arms control service members [at Spangdahlem Air Base, Germany] on May 3. *(498 words)* ***Click here for full text.***

FISSILE MATERIALS

"Ghost Particle" Detectors Closer to Preventing Nuclear Proliferation

IEEE Spectrum, 28 April 2011, spectrum.ieee.org

A joint group of physicists based in California at Lawrence Livermore National Laboratory [LLNL] and Sandia National Laboratories [SDNL] aims to capture reactor-born antineutrinos with a detector they plan to install next year at the Point Lepreau Generating Station, a [Canada Deuterium Uranium] CANDU-type nuclear reactor in New Brunswick, Canada. *(1,189 words)* ***Click here for full text.***

Second Z Plutonium 'Shot' Safely Tests Materials for NNSA

National Nuclear Security Administration (NNSA), 11 May 2011, nnsa.energy.gov

The NNSA today announced that researchers from Sandia and Los Alamos national laboratories have completed their second experiment in the past six months at Sandia's Z machine to explore the properties of plutonium materials under extreme pressures and temperatures. *(519 words)* ***Click here for full text.***

FISSILE MATERIAL CUT-OFF TREATY (FMCT)

Nations Weigh Taking Fissile Material Talks outside Disarmament Forum

Global Security Newswire, 17 May 2011; www.globalsecuritynewswire.org

France, the United Kingdom and the United States have recently informally discussed pursuing negotiations on a fissile material cutoff treaty outside the international Conference on Disarmament in Geneva, Switzerland, the British American Security Information Council stated on Monday. *(361 words)* ***Click here for full text.***

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NEW START TREATY (NST)

Experts Offer Ideas for Further U.S.-Russian Nuke Cuts

Global Security Newswire, 05 May 2011; www.globalsecuritynewswire.org

A group of U.S. and Russian defense specialists this week issued a report with ideas intended to promote nonproliferation and further cutbacks in the two nations' nuclear arsenals, the Ploughshares Fund announced. *(299 words)* **Click here for full text.**

Russian Defense Ministry May Broadcast Live Bulava Missile Launches

RIA Novosti, 07 May 2011, en.rian.ru

The Russian Defense Ministry plans to broadcast live test launches of the Bulava submarine-launched ballistic missile (SLBM) on its new website, spokesman Igor Konashenkov said. *(119 words)* **Click here for full text.**

Non-Nuclear Use Seen For B-52H Bombers

Air Force Times, 09 May 2011, www.airforcetimes.com

The Air Force will be able to keep a number of B-52H bombers flying as conventional weapons-only aircraft under the New START treaty with Russia, defense officials told Congress last week. *(332 words)* **Click here for full text.**

Global Insights: U.S., NATO Ponder Tactical Nuclear Arms Control with Russia [OPINION]

World Politics Review, 10 May 2011, www.worldpoliticsreview.com

By Richard Weitz, senior fellow at the Hudson Institute and a World Politics Review senior editor

When the U.S. Senate ratified the New START Treaty last December, it also enacted a resolution directing the Obama administration to begin negotiations with Russia on limiting the two countries' tactical nuclear weapons. *(1,214 words)* **Click here for full text.**

House Panel Approves Amendments on New START Implementation

Global Security Newswire, 12 May 2011; www.globalsecuritynewswire.org

The U.S. House Armed Services Committee on Thursday approved legislation containing provisions that might restrict the Obama administration's ability to implement a new Russian-U.S. nuclear arms control deal. *(837 words)* **Click here for full text.**

FULL TEXT OF BI-WEEKLY ARTICLES FOLLOWS:

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Workers Begin X-rays of Mustard Rounds at Blue Grass Army Depot

Lexington Herald-Leader, 10 May 2011, www.kentucky.com

Workers began X-raying a random sample of 155mm mustard rounds Monday at Blue Grass Army Depot in Madison County.

"Safety is our number one priority," said Lt. Col. Steven Basso, commander of Blue Grass Chemical Activity, the chemical weapons operation at the depot. "We are not going to do anything that's going to put anybody, civilians or workers, at risk."

The results of the X-rays will be used to determine whether the projectiles should be exploded inside steel detonation chambers at some later date. No decision has been made to explode the mustard rounds, Basso said.

Army officials suspect that the normally liquid mustard agent inside the 60-year-old shells has solidified into a gel or tarlike consistency and can't be drained. They base that suspicion on some problem rounds found in 2008 at Tooele Army Depot in Utah.

Some 65 percent of the mustard lots in the Blue Grass stockpile are identical to those in Utah. Blue Grass Army Depot has 15,492 mustard rounds, and that represents about 181,000 pounds of mustard agent, said Anthony Reed, deputy site project manager for the pilot plant under construction.

If the rounds have solidified, that would pose safety risks to workers at the pilot plant that eventually will destroy the chemical weapons at the depot. And that would affect the time line for destruction of the weapons because the plant will be set up for an automated process.

"If we find that there is solidification in these rounds, at that point we will have a different path forward to consider," Reed said. By that he meant the possible detonation of the mustard rounds in steel containers, an option selected at weapons-destruction sites in Utah and Anniston, Alabama.

In January, the Kentucky Energy and Environment Cabinet approved a plan to X-ray a sample of 96 mustard rounds, Basso said. The X-ray operation is scheduled to be finished by the end of June. If everything stays on schedule, a report on the X-ray assessment might be released in mid- to late July, Basso said.

A random sampling of rounds was moved earlier this year. Each round was "overpacked," or put into a leakproof container, then moved to the igloo where they will be X-rayed.

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Workers go inside an igloo and move each round to an X-ray machine in that igloo, Basso said. The workers then leave the igloo, and the round is X-rayed. It takes about five minutes to perform each X-ray shot, and more than one shot is done on each round. Once the photos are found to be satisfactory, the workers put that round back into the stack and prepare another round for X-raying.

"It's a lengthy process," Basso said. "All my personnel are wearing personal protective equipment. It's not like going to your doctor and lying down on the X-ray table and then walking out." About six to eight rounds can be X-rayed in a single day.

Even if there happened to be a leak, the leak would not leave the igloo, Basso said. So crews working with the rounds, construction workers at the pilot plant and any residents in surrounding counties are not at risk, he said.

The pilot plant is 32 percent complete as of last week and is on schedule, Reed said. The plant won't be finished until 2016, and chemical weapons won't be destroyed there until 2018 under the current time line.

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Chemical Weapons Destruction in Utah Ahead of Treaty Deadline

Deseret News, 13 May 2011, www.deseretnews.com

The final large container of mustard gas in the stockpile at the Deseret Chemical Depot is scheduled for incineration on Monday. The event is historic for the depot and Tooele Chemical Agent Disposal facility, where work to destroy the largest stockpile of the nation's chemical weapons has been a full-time effort for the past 15 years.

Stainless steel containers weighing 19,000 pounds have gone back and forth from storage igloos to the incineration plant more than 24,000 times since the first shipment to the incinerator August 21, 1996. The final container carrying mustard gas moved to the main incineration plant on Wednesday, according to the depot.

Inside the massive facility, remotely operated robotics will punch and drain the mustard gas container and incinerate it Monday morning as community leaders watch a video feed at the project's outreach center miles away.

"We have nearly reached our treaty obligations here through the effective teamwork of professionals dedicated to creating a safer tomorrow," said depot commander Col. Mark B. Pomeroy. "It has taken the commitment and expertise of not only toxic materials handlers but an integrated team of trained professionals to reach this milestone."

Depot spokeswoman Alaine Greiser said the chemical weapons stockpile that existed before the process began is now 99.7 percent gone. After Monday's scheduled event, the main incineration facility will start destroying secondary waste. Remaining munitions and containers of the nerve agent GA, captured from the Germans at the end of World War II, and blister agent lewisite, will be destroyed in smaller facilities on the depot.

Some of the remaining odds and ends include 300 aging munitions where the explosives could not safely be separated from their toxic payload. Those munitions will be paired with a separate explosive charge and detonated inside a bomb chamber installed at the depot about one month ago.

Greiser said the remaining work should be accomplished in January or February [2012], ahead of the April 29, 2012, Chemical Weapons Convention treaty deadline. The international treaty requires destruction of chemical weapons throughout the world.

Utah is among eight states with chemical weapons depots and is home to what was the nation's largest chemical weapons stockpile.

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Disposal Facility Destroys Last Mustard Agent-Filled Bulk Container

U.S. Army Chemical Materials Agency, 17 May 2011, www.cma.army.mil

Workers at the Tooele Chemical Agent Disposal Facility (TOCDF) yesterday destroyed the last of 6,399 mustard agent-filled bulk containers originally stored at the U.S. Army's Deseret Chemical Depot (DCD). The agent drained from the last bulk container, which exited the TOCDF Metal Parts Furnace at 5:30 p.m., is expected to be destroyed in a liquid incinerator over the next couple of days.

"This is a milestone we've looked forward to announcing for 15 years," said Depot Commander, Col. Mark Pomeroy. "While our chemical weapons destruction work is not quite finished at DCD, the mission of the TOCDF plant is nearly complete." Ted Ryba, TOCDF site project manager for the U.S. Army Chemical Materials Agency said, "I am proud to have been here on that first day of destruction operations on August 22, 1996, and even more proud to be able to report that TOCDF has safely processed its last mustard agent-filled bulk container.'

Less than one percent of the original stockpile of 13,600 tons of nerve and blister chemical agents remains to be destroyed. Work is continuing within the depot's munitions storage area on two separate projects which will complete the elimination of the chemical weapons stockpile here in Utah.

An explosive detonation chamber called the DAVINCH (Detonation of Ammunition in a Vacuum Integrated Chamber) will be used to destroy more than 300 mustard agent-filled 155-millimeter projectiles and 4.2 inch mortar cartridges whose condition is too poor to enable processing in the TOCDF. All of these projectiles and mortars are contained in over-pack containers and will be destroyed within the safe containment of the DAVINCH.

In addition, there are a relatively small number of bulk containers of GA nerve agent which was seized in Germany following World War II, and a slightly larger collection of bulk containers of Lewisite, a blister agent. These bulk agents will be destroyed in a separate, small-scale liquid incinerator. The entire DCD chemical weapons stockpile is expected to be safely eliminated early 2012.

Gary McCloskey, vice president and general manager of TOCDF systems contractor, URS, noted that all of the remaining chemical weapons destruction work at DCD is being conducted by URS and its subcontractors. McCloskey said, "After many years of careful and diligent work, I know I speak for our workers in expressing pride at what has been accomplished at the TOCDF. As we prepare to move the plant into a closure phase, let me assure the people of Utah that we will continue to work to safely complete our mission until the last drop of chemical agent is safely destroyed."

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NNSA Begins New Campaign of Verification Experiments at Nevada National Security Site

National Nuclear Security Administration (NNSA), 04 May 2011, nnsa.energy.gov

The NNSA today announced that it has successfully conducted the first of a new kind of experiment aimed at improving arms control and nonproliferation treaty verification. The new experiments, called Source Physics Experiments [SPEs], are being conducted at NNSA's Nevada National Security Site (NNSS) and will provide ground truth data to enhance the United States ability to detect and discriminate "low-yield" nuclear explosions amid the clutter of conventional explosions and small earthquake signals.

[SPEs] are an example of the expanded role NNSS is playing in our nation's nuclear security strategy. In August 2010, NNSA announced a new name for the site, which better reflects the diverse and unique capabilities that exist at NNSS. The SPE conducted at the site on Tuesday, was the first of its kind since the expansion of the NNSS mission.

"By conducting this experiment the United States can validate and improve seismic models and the use of new generation technology to further monitor countries' compliance with the Comprehensive Nuclear Test-Ban Treaty [CTBT]," said NNSA Deputy Administrator for Defense Nuclear Nonproliferation Anne Harrington. "The experiment marks an important step in strengthening the relationship of the NNSS and NNSA's Defense Nuclear Nonproliferation programs while implementing President Obama's nuclear security agenda."

The experiment was conducted by the NNSS management and operations contractor National Security Technologies in partnership with Los Alamos National Laboratory, Lawrence Livermore National Laboratory, Sandia National Laboratories and the Department of Defense's, Defense Threat Reduction Agency. The experiment was conducted 180 feet beneath the surface of Area 15 at NNSS using 220 pounds of chemical high explosives.

"Integrating the requirements and needs of the laboratories and other federal agencies has been a hallmark of the NNSS," said Steve Mellington, Manager of the NNSA's Nevada Site Office. "With the conduct of the Source Physics Experiment, the NNSS demonstrates its role to meet the future national security requirements of our agency and our country, and our commitment to investing in the future."

This collaborative effort by the NNSA and its national laboratories and the Department of Defense allowed each entity to bring its expertise and resources to the experiment and ultimately share in the data obtained. This saves the government the expense of conducting separate experiments for each group of scientists who need the data to validate models.

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The Case for the Comprehensive Nuclear Test-Ban Treaty [EXCERPT]

U.S. Department of State, 10 May 2011, www.state.gov
Remarks by Ellen Tauscher, Under Secretary for Arms Control and International Security at the Arms Control Association Annual Meeting at the Carnegie Endowment for International Peace

Many of you have heard me speak many times about what this Administration intended to accomplish and what we have accomplished. In the two years since President Obama's speech in Prague, the Administration has taken significant steps and dedicated unprecedented financial, political, and technical resources to prevent proliferation, live up to our commitments, and to move toward a world without nuclear weapons. […]

But let me turn to the Comprehensive [Nuclear] Test-Ban Treaty [CTBT]. President Obama vowed to pursue ratification and entry into force of the CTBT in his speech in Prague. In so doing the United States is once again taking a leading role in supporting a test ban treaty just as it had when discussions first began more than 50 years ago.

As you know, in the aftermath of the Cuban Missile Crisis, the United States ratified the Limited Test-Ban Treaty [LTBT], which banned all nuclear tests except those conducted underground. The Cuban Missile Crisis, which was about as close as the world has ever come to a nuclear exchange, highlighted the instability of the arms race. Even though scholars have concluded that the United States acted rationally, the Soviet Union acted rationally, and…Fidel Castro acted rationally, we came perilously close to nuclear war. […]

In the months after the crisis, President Kennedy used his new found political capital and his political skill to persuade the military and the Senate to support a test ban treaty in the hopes of curbing a dangerous arms race. He achieved a[n LTBT], but aspired to do more. Yet, today, with more than 40 years of experience, wisdom, and knowledge about global nuclear dangers, a legally binding ban on all nuclear explosive testing still eludes us.

This being Washington, everything is seen through a political lens. So before discussing the merits of the [CTBT] let me talk about this in a political sense for a moment. I know that the conventional wisdom is that the ratification of New START has delayed or pushed aside consideration of the CTBT. I take the opposite view.

The New START debate, in many ways, opened the door for the CTBT. Months of hearings and debate and nine long days of floor deliberations engaged the Senate, especially its newer members, in an extended seminar on the composition of our nuclear arsenal, the health of our stockpile, and the relationship between nuclear weapons and our national security.

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When the Senate voted for the [New START] Treaty, it inherently affirmed that our stockpile is safe, secure, and effective, and can be kept so without nuclear testing. […] So we are in a stronger position to make the case for the CTBT on its merits.

To maintain and enhance that momentum, the Obama Administration is preparing to engage the Senate and the public on an education campaign that we expect will lead to ratification of the CTBT. In our engagement with the Senate, we want to…explain why the CTBT will enhance our national security. Our case for [CTBT] ratification consists of three primary arguments:

- The United States no longer needs to conduct nuclear explosive tests…;
- A CTBT that has entered into force will obligate other states not to test and provide a disincentive for states to conduct such tests; and
- We now have a greater ability to catch those who cheat.

Let me take these points one by one. From 1945 to 1992, the United States conducted more than 1,000 nuclear explosive tests – more than all other nations combined. The cumulative data gathered from these tests have provided an impressive foundation of knowledge for us to base the continuing effectiveness of our arsenal. But historical test data alone is insufficient.

Well over a decade ago, we launched an extensive and rigorous Stockpile Stewardship program that has enabled our nuclear weapons laboratories to carry out the essential surveillance and warhead life extension programs to ensure the credibility of our deterrent.

Every year for the past 15 years, the Secretaries of Defense and Energy from Democratic and Republican Administrations, and the directors of the nuclear weapons laboratories have certified that our arsenal is safe, secure, and effective. And each year they have affirmed that we do not need to conduct explosive nuclear tests. The lab directors tell us that Stockpile Stewardship has provided a deeper understanding of our arsenal than they ever had when testing was commonplace. […] Our current efforts go a step beyond explosive testing by enabling the labs to anticipate problems in advance and reduce their potential impact on our arsenal – something that nuclear testing could not do. […]

This Administration has demonstrated an unprecedented commitment to a safe, secure, and effective arsenal so long as nuclear weapons exist. […] The President has committed $88 billion in funding over the next decade to maintain a modern nuclear arsenal, retain a modern nuclear weapons production complex, and nurture a highly trained workforce.

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When it comes to the CTBT, the United States is in a curious position. We abide by the core prohibition of the treaty because we don't need to test nuclear weapons. And we have contributed to the development of the International Monitoring System [IMS]. But the principal benefit of ratifying the treaty, constraining other states from testing, still eludes us. […]

Second, a CTBT that has entered into force will hinder other states from advancing their nuclear weapons capabilities. Were the CTBT to enter into force, states interested in pursuing or advancing a nuclear weapons program would risk either deploying weapons that might not work or incur international condemnation and sanctions for testing.

While states can build a crude first generation nuclear weapon without conducting nuclear explosive tests, they would have trouble going further, and they probably wouldn't even know for certain the yield of the weapon they built. More established nuclear weapons states could not, with any confidence, deploy advanced nuclear weapon capabilities that deviated significantly from previously tested designs without explosive testing.

Nowhere would these constraints be more relevant than in Asia, where you see states building up and modernizing their forces. A legally binding prohibition on all nuclear explosive testing would help reduce the chances of a potential regional arms race in the years and decades to come.

Finally, we have become very good at detecting potential cheaters. If you test, there is a very high risk of getting caught. Upon the [CTBT's] entry into force, the United States would use the [IMS] to complement our own state-of-the-art national technical means to verify [compliance].

In 1999, not a single certified IMS station or facility existed. We understand why some senators had doubts about its future, untested capabilities. But today the IMS is more than 75 percent complete. 254 of the planned 321 monitoring stations are in place and functioning. And 10 of 16 projected radio-nuclide laboratories have been completed. The IMS detected both of North Korea's two announced nuclear tests.

While the IMS did not detect trace radioactive isotopes confirming that the 2009 event was in fact a nuclear explosive test, there was sufficient evidence to support an on-site inspection. On-site inspections are only permissible once the [CTBT] enters into force. An on-site inspection could have clarified the ambiguity of the 2009 test.

While the IMS continues to prove its value, our national technical means remain second to none and we continue to improve them. Last week, our colleagues at the NNSA conducted the first of a series of Source Physics Experiments [SPEs] at the Nevada Nuclear Security Site [NNSS].

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These experiments will allow the United States to validate and improve seismic models and the use of new generation technology to further monitor compliance with the CTBT. Senators can judge our overall capabilities for themselves by consulting the National Intelligence Estimate [NIE] released last year.

Taken together, these verification tools would make it difficult for any state to conduct nuclear tests that escape detection. In other words, a robust verification regime carries an important deterrent value in and of itself … because there would be a significant cost to pay for those countries that [cheat].

We have a strong case for [CTBT] ratification. In the coming months, we will build upon and flesh out these core arguments. … Soon, the National Academy of Sciences, a trusted and unbiased voice on scientific issues, will release an unclassified report examining the [CTBT] from a technical perspective. The report will look at how U.S. ratification would impact our ability to maintain our nuclear arsenal and our ability to detect and verify explosive nuclear tests.

Let me conclude by saying that successful U.S. ratification of the CTBT will help facilitate greater international cooperation on the other elements of the President's Prague Agenda. It will strengthen our leverage with the international community to pressure defiant regimes … as they engage in illicit nuclear activities. We will have greater credibility when encouraging other states to pursue nonproliferation objectives, including universality of the Additional Protocol.

In short, ratification helps us get more of what we want. We give up nothing by ratifying the CTBT. […]

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Hungarians Inspect Wing for Treaty Compliance

Military Aerospace, 04 May 2011, www.militaryaerospace.com

Spangdahlem Air Base, Germany, U.S. Air Forces in Europe issued the following press release:

The 52nd Fighter Wing [FW] was the subject of two treaty compliance [inspections] by Hungarian arms control service members here on May 3. "This is the first time any base in the U.S. Air Forces in Europe [command] has undergone two of these [inspections] in the same day," David Ehnis, 52nd FW treaty compliance officer, said.

The first [inspection was conducted under] the Conventional Armed Forces in Europe [CFE] Treaty, identified the wing's treaty limited equipment and deficiencies. "Treaty limited equipment is considered [to be] any conventional weapon, from combat aircraft to tanks and artillery," Mr. Ehnis said. "According to the treaty, we are limited in the amount of conventional weapons our base can have as part of a larger NATO quantity."

The [CFE] treaty was signed between NATO [countries] and [those of] the [then] Warsaw Pact [on] November 19, 1990. [The CFE] set equal limits on the amount of conventional weapons each side could have and deploy. According to the Arms Control Association, this system of checks and balances endured even after the fall of the Soviet Union as a common means of preventing mass military offensives in Europe.

Part of the inspection included the physical accountability of each fighter aircraft on the base. "Our goal is to ensure you don't have more aircraft than you are allowed and that the [physical] quantity matches what you report," Hungarian Defense Force Maj. Peter Benei, a member of the inspection team, said. The accountability ensures members are in compliance with the treaty and that excess weaponry is not being used.

"The problem is that it actually does happen," Major Benei said. "There have been CFE inspections where there were aircraft found that were never once reported by the base. This creates a huge problem that must be immediately dealt with."

With the high demands on the 52nd FW's fighter aircraft, not every plane was present on base for this inspection. Lt. Col. Shane Louis, Defense Threat Reduction Agency [DTRA] lead escort for the treaty inspections, explained the difficulties the wing faces.

"With operations in Iraq, Afghanistan and other parts of the world, it is natural that aircraft will not be present for inspections like this," Colonel Louis said.

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After the CFE compliance inspection, the inspectors began the second treaty [inspection] of the day: a Vienna Document 1999 [VDOC] evaluation [inspection].

The [VDOC provides for] an exchange of information that concerns military organization, manpower and major weapon and equipment systems. It is designed to promote mutual trust between the members of the Organization for Security and Cooperation in Europe [OSCE].

The [VDOC] evaluation [inspection] included a tour of the base, a look at Airmen's living quarters and a weapons load demonstration.

"The VDOC is all about transparency," Mr. Ehnis said. "This openness allows our partner nations to see how we live, how we take care of our people and that we function as an integrity-based organization."

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"Ghost Particle" Detectors Closer to Preventing Nuclear Proliferation

IEEE Spectrum, 28 April 2011, spectrum.ieee.org

The neutrino, or "ghost particle," is strikingly aloof. On Earth, tens of billions of the sun's neutrinos pass through an area the size of a thumbtack every second. But most of these particles zip straight through Earth without a single interaction with another bit of matter.

Neutrino detectors, which aim to catch such ghosts, are traditionally big affairs, sometimes employing large vats of water or oil, a deep patch of the Mediterranean, or even a cubic kilometer of Antarctic ice to boost the chance of seeing the specters.

But physicists have been working to adapt the technology to make detectors small enough to be installed inside nuclear power plants. If their prototypes are proved, such detectors could continuously monitor nuclear reactors and provide a new way to safeguard against nuclear proliferation.

The detectors in development hunt for the neutrino's antimatter sibling, the antineutrino, which shares most of its properties. Nuclear reactors are the largest man-made source of antineutrinos. A typical 1-gigawatt [GW] nuclear reactor pumps out some 100 billion antineutrinos per second. Because these particles pass through any shielding pretty much unimpeded, their signal can't be masked.

A joint group of physicists based in California at Lawrence Livermore National Laboratory [LLNL] and Sandia National Laboratories [SDNL] aims to capture reactor-born antineutrinos with a detector they plan to install next year at the Point Lepreau Generating Station, a [Canada Deuterium Uranium] CANDU-type nuclear reactor in New Brunswick, Canada. They will present an update on tests of the detector next week at the American Physical Society April Meeting in Anaheim, California.

To catch antineutrinos, the detector employs hundreds of liters of organic solvent mixed with gadolinium atoms. Incoming antineutrinos occasionally collide with protons in the mixture, creating a neutron and a positron, the antimatter partner of the electron. The positron creates a flash of light when it meets with and annihilates an electron, and the neutron releases light when it is captured by a gadolinium atom. The detectors are studded with photosensitive tubes that convert these flashes of light into electronic signals.

The two precisely timed flashes are unique to antineutrinos, but physicists must still contend with confounding signals, particularly those created by charged particles that originate in Earth's

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atmosphere. They can insulate detectors from this background noise by placing them underground.

The Point Lepreau detector, which will measure about 3 meters on each side, is the fourth in a series developed by the Livermore-Sandia team. The previous three detectors were installed over the course of the past decade at a 1.1-GW pressurized water reactor at California's San Onofre Nuclear Generating Station.

The team's first demonstration detector at San Onofre picked up about 400 antineutrinos per day during a 600-day test period. That was good enough to provide near real-time data on the state of the reactor. The detector could "tell when the reactor has been turned off within a few hours, which is important, because if you wanted to remove any fissile material, you would have to turn the reactor off," says team member Timothy Classen, of Lawrence Livermore.

But the team hopes it can mine antineutrino data to give even more information about what's going on inside the reactor. An operator that runs a reactor at a higher power or uses fuel with more uranium-238 can boost the production rate of plutonium that could be used for nuclear weapons. Uranium releases more detectable antineutrinos than plutonium does, so monitoring the rate of antineutrino emission could potentially indicate whether a reactor is being run as intended or if material for weapons has been removed.

At the moment, the sensitivity of the detectors to changes in plutonium content is fairly low. But in a paper that will appear in the Journal of Applied Physics, Adam Bernstein, who leads the Lawrence Livermore group, and colleague Vera Bulaevskaya determined that, using 90 days of data, a detector that can register 2,000 antineutrinos per day from a pressurized water reactor could be used to detect whether 73 kilograms [kg] of plutonium had been removed.

The International Atomic Energy Agency (IAEA) deems just 8 kg of plutonium a "significant quantity," because it is enough to make a nuclear explosive device.

On their own, antineutrino detectors may never be able to sense whether such a small amount goes missing from the entire reactor. But the data they collect, combined with reactor simulations, might be able to show whether each grouping of fuel rods contains as much plutonium as expected to within a "significant quantity" at the end of a fuel cycle, Bernstein says.

A handful of other teams are also working on antineutrino reactor monitors. At the French Alternative Energies and Atomic Energy Commission (CEA), in Saclay, France, a team led by

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Thierry Lasserre and David Lhuillier has developed a detector called Nucifer, set to be installed at the 70-megawatt Osiris research reactor within the next several months.

Due to some design improvements, Nucifer is expected to detect half of the antineutrinos that interact with the detector – a fivefold increase over the Livermore-Sandia team's original San Onofre detector. If Nucifer were installed at a similar plant at the same distance from the core, the team estimates it would register several thousand antineutrinos each day – enough to detect a change in plutonium content.

Both teams are aiming for a detector that is inexpensive enough to be used commercially. Bernstein estimates the cost of the Livermore-Sandia detectors at U.S. $250 000 but expects that could be driven down to $100 000. "Our contention is that in an engineering setting, where you're not buying custom pieces and you're not putting it together in a lab, the cost would go down substantially," he says.

One of the appealing aspects of the technology is that it is relatively inexpensive to integrate into a nuclear power station. Because antineutrinos pass easily through matter, the detectors can be installed outside of a containment vessel. "There's a lot of expense in connecting anything inside a nuclear facility," says Julian Whichello, head of the IAEA's Novel Technologies Unit, in Vienna. "But with an antineutrino detector, it's a nice self-contained box that sits next to a reactor, and all you have to do is provide it power."

Whichello says today's reactors are "pretty well covered" by current IAEA safeguard technology. The [IAEA] monitors nuclear reactors by sending inspectors when fuel is being switched in and out, a process that ordinarily occurs every 12 to 18 months. A suite of sensors that include cameras, digital seals on fuel assemblies, and radiation detectors are also used.

But Whichello says these safeguards may not be enough for next-generation reactors – like pebble-bed and liquid-core models – that are designed to run continuously, without ever requiring a shutdown to be refueled.

Continuous fuel loading can make tagging and inspection difficult. "You can no longer individually identify an element to trace it," Whichello says. "This is why we feel we need additional technology for the future."

In 2010, the IAEA invited teams working on the technology to form a working group to discuss its potential uses. The group's first official meeting is set to take place in September at IAEA headquarters in Vienna.

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Second Z Plutonium 'Shot' Safely Tests Materials for NNSA

National Nuclear Security Administration (NNSA), 11 May 2011, nnsa.energy.gov

The National Nuclear Security Administration (NNSA) today announced that researchers from Sandia and Los Alamos national laboratories have completed their second experiment in the past six months at Sandia's Z machine to explore the properties of plutonium materials under extreme pressures and temperatures. The information is used to keep the U.S. nuclear stockpile safe, secure and effective.

The Z machine – the Earth's most powerful and efficient laboratory radiation source – is capable of performing 200 "shots," or experiments, every year. Experiments with plutonium require more care and are done relatively infrequently.

The March 31 experiment is a continuation of studies performed at Sandia prior to the major refurbishment of the Z machine in 2007, which increased its output of electrical energy from 18 mega amperes to 26 mega amperes. This enables Z researchers to gather data from materials subjected to conditions that more closely resemble those found in nuclear weapons, the cores of planets and stars.

"The ultrafast closure valve and containment chamber performed as expected, isolating the plutonium within the primary containment system," said Mike Lopez, Z Operations manager. The same arrangement was used on the earlier shot.

Don Cook, National Nuclear Security Administration deputy administrator for defense programs, said, "The second successful experiment exploring the properties of plutonium materials at the Z Machine helps implement President Obama' nuclear security agenda while maintaining the safety, security and effectiveness of the nuclear weapon stockpile without underground nuclear testing."

Said Keith Matzen, director of Sandia's Pulsed Power Program, "By applying lessons learned from the first plutonium experiment on the refurbished Z facility last November, our staff significantly improved the operational efficiency for this second experiment and safely provided high-quality, mission-critical data. Once again I am very proud of the Z team."

Don Brunell, a senior technical safety adviser at the Department of Energy's Sandia Site Office, congratulated Sandia for successfully completing the experiment while maintaining high standards of both science and safety.

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"What we did was work as an integrated team with the line to accomplish the mission safely and efficiently while protecting the environment," said former astronaut Sid Gutierrez, Sandia's chief safety officer.

The machine uses electrical currents of about 26 million amps to reach peak X-ray emissions of 350 terawatts, an X-ray output of 2.7 megajoules and pressures greater than those at the center of the Earth.

The Z machine is part of Sandia's Pulsed Power Program. Pulsed power is a technology that concentrates electrical energy and turns it into short pulses of enormous power, which are then used to generate X-rays. Produced in the laboratory, this controlled radiation or magnetic pressure creates conditions on a small scale similar to those caused by the detonation of nuclear weapons, which is why from its earliest days pulsed power has been used to study weapons effects.

Sandia National Laboratories is a multiprogram laboratory operated and managed by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration. With main facilities in Albuquerque, N.M., and Livermore, Calif., Sandia has major R&D responsibilities in national security, energy and environmental technologies, and economic competitiveness.

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Nations Weigh Taking Fissile Material Talks outside Disarmament Forum

Global Security Newswire, 17 May 2011; www.globalsecuritynewswire.org

France, the United Kingdom and the United States have recently informally discussed pursuing negotiations on a fissile material cutoff treaty [FMCT] outside the international Conference on Disarmament [CD] in Geneva, Switzerland, the British American Security Information Council stated on Monday.

"Our preference is to negotiate the FMCT within the Conference on Disarmament, but it is becoming increasing doubtful that the conference can achieve consensus to begin such negotiations," U.S. national security adviser Tom Donilon said in late March in Washington. "As a consequence, we will begin consultations with our allies and partners to consider an alternative means to begin FMCT negotiations. To be successful, we will encourage all permanent members of the [UN] Security Council and other relevant parties to participate in this effort."

Germany and the Netherlands could also later this month join discussions on independent talks for a treaty to halt production of nuclear material for weapons. China to date remains outside the discussions […]

The 65-nation [CD] in 2009 ended a deadlock that had lasted for more than a decade, agreeing to a work plan that would focus on preparing a fissile material cutoff pact and three other issues: nuclear disarmament, a ban against space-based weapons, and an agreement by nuclear-armed states not to use such weapons against countries that do not possess atomic armaments. While Pakistan initially backed the work plan, it later canceled its consent and demanded further consideration of the program. Decisions at the [CD] are made by consensus.

A group of 10 nations in April said they would urge the UN General Assembly to "consider ways to proceed with the aim of beginning negotiations" on the fissile material pact if the conference stalemate persists through 2011.

Significant differences linger over monitoring terms and what specifically would be covered by an agreement, though, and a deal would be of little value without Pakistan's participation, according to the BASIC release.

"This is going to be a very lengthy, difficult, complicated negotiation," White House arms control and nonproliferation coordinator Gary Samore told Arms Control Today. Still, "the longer we wait to get started, the longer it will be before a treaty can actually be achieved," he said.

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Experts Offer Ideas for Further U.S.-Russian Nuke Cuts

Global Security Newswire, 05 May 2011; www.globalsecuritynewswire.org

A group of U.S. and Russian defense specialists this week issued a report with ideas intended to promote nonproliferation and further cutbacks in the two nations' nuclear arsenals, the Ploughshares Fund announced.

The report was produced by Sustainable Partnership with Russia Group, a collaboration of the Ploughshares Fund and the [Policy Studies in Russia] PIR Center in Russia. Participants in the effort included Russian Deputy Defense Minister Anatoly Antonov and experts who have served in the military and government from both states.

The report was released three months after Moscow and Washington began implementing the New START arms control treaty, which requires the former Cold War rivals to each limit their deployed strategic nuclear arsenals to 1,550 warheads and 700 delivery systems.

The two nations can take a number of measures to avoid a post-New START "cold pause" in their relationship, according to the report. These include:

- Carrying out the nuclear cuts required by the treaty before the next Nuclear Nonproliferation Treaty [NPT] review conference in 2015;
- Offering increased openness on the two nations' stockpiles, through steps such as publicly detailing the count of weapons that are disassembled annually;
- Moving to "de-alert" nuclear arms;
- Pressing forward for collaboration on missile defense between Russia and NATO;
- Renewing talks on Iran's nuclear and missile activities, "working toward a common understanding of the risks and a list of options";
- Pursuing a successful outcome for the planned conference next year on designating the Middle East as a WMD-free zone; and
- Increasing Middle Eastern involvement in multilateral nonproliferation events such as the Global Nuclear Security Summit, held last year in Washington and planned for 2012 in South Korea.

The recommendations are being delivered this week to high-level policymakers in both capitals, Ploughshares Fund President Joseph Cirincione said.

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Russian Defense Ministry May Broadcast Live Bulava Missile Launches

RIA Novosti, 07 May 2011, en.rian.ru

The Russian Defense Ministry plans to broadcast live test launches of the Bulava submarine-launched ballistic missile (SLBM) on its new website, spokesman Igor Konashenkov said.

Russia plans to resume test launches of Bulava SLBM in June and to conduct at least four test launches this year. If they are successful, the missile will be put in service by year end.

"We will seek to provide visitors of our website with live broadcast of Bulava missile test launches," Konashenkov said.

The Bulava (SS-NX-30) SLBM carries up to 10 MIRV warheads and has a range of over 8,000 kilometers (5,000 miles). The Russian military expects the Bulava, along with Topol-M land-based ballistic missiles, to become the core of Russia's nuclear triad.

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Non-Nuclear Use Seen For B-52H Bombers

Air Force Times, 09 May 2011, www.airforcetimes.com

The Air Force will be able to keep a number of B-52H bombers flying as conventional weapons-only aircraft under the New START treaty with Russia, defense officials told Congress last week.

U.S. authorities would have to certify the denuclearized bombers as fully capable of flying conventional weapons before presentation to the Russians, said Air Force Gen. C. Robert Kehler, who leads U.S. Strategic Command. Kehler testified May 4 before the Senate Armed Services Committee.

“We haven’t gotten to the complete end of that string yet about approvals to represent it that way with the Russians – that’s pending,” Kehler said. “We believe we have a good way to do that that still allows them to be capable for conventional missions.”

James Miller, principal undersecretary of defense for policy, who was also testifying, added the Defense Department had not settled on how the B-52s would be converted before being presented to Russia for “exhibition.”

A total of 40 B-52s and 20 B-2 stealth bombers will be kept for the nuclear role as part of the treaty’s limitation of 700 delivery vehicles per side, according to Miller’s testimony.

Also ICBMs

The Air Force will keep 420 out of 450 Minuteman III intercontinental ballistic missiles [ICBMs], but the payload would be reduced to a single warhead per missile. The Minuteman is capable of carrying three warheads.

The Navy will fill out the rest of the nuclear triad with its fleet of 14 Ohio-class ballistic missile submarines, which will carry “no more than 240 Trident II D5 [submarine-launched ballistic missiles] at any time,” Miller testified. Miller said that both Russia and the United States had already conducted some steps required by the treaty. The two nations have exchanged nuclear weapons databases.

The United States has exhibited the B-2 and B-1 bombers to the Russians, and the Russians have exhibited the RS-24, also known as the SS-27, road-mobile ICBM to the United States, Kehler said. The United States has also inspected a Russian SS-19 ICBM site, he added.

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U.S., NATO Ponder Tactical Nuclear Arms Control with Russia [OPINION]

World Politics Review, 10 May 2011, www.worldpoliticsreview.com

By Richard Weitz, senior fellow at the Hudson Institute and a World Politics Review senior editor

U.S. and NATO officials are currently deciding what specific arms control measures they will seek regarding the remaining tactical nuclear weapons (TNW) in Europe. Although NATO officials have linked further reductions in the alliance's TNW to reciprocal Russian reductions, NATO governments have yet to propose any formal TNW negotiations with the Russian government. Specifically, they must determine what objectives to seek, what negotiating forum to use, and how to verify any agreement regarding these weapons.

When the U.S. Senate ratified the New START Treaty last December, it also enacted a resolution directing the Obama administration to begin negotiations with Russia on limiting the two countries' tactical nuclear weapons. At its November 2010 summit in Lisbon, NATO governments also confirmed the position adopted earlier that year that the alliance link any further reductions in its TNW stockpiles to changes in Russia's policies regarding its own much larger TNW arsenal. Specifically, the ministers called on Russia to eliminate many of these weapons, to relocate any remaining TNWs away from neighboring NATO countries and to make these holdings more transparent.

Unfortunately, Russian officials have not shown interest in negotiating formal limits on their TNW, which, Russian analysts argue, make valuable contributions to Russia's security. In addition to contributing to Russia's deterrent against nuclear strikes, Russia's TNWs help compensate for weaknesses in Russian conventional forces. In this respect, Russian TNW can help negate NATO's qualitative conventional advantages in the west as well as China's quantitative superiority in the east.

Tactical nuclear weapons could also help Russia overcome NATO's ballistic missile defenses through a saturation effect, by effectively doubling or tripling the potential number of Russia's nuclear-armed missiles capable of striking Western targets. Moreover, TNWs represent one of the few military categories in which Russia has a clear advantage over NATO militaries, enhancing Russia's bargaining position in certain arms control negotiations.

Finally, concerns about deterring a potential pre-emptive attack against Russia by NATO forces leads Russian military strategists to value precisely those characteristics of their TNW – their mobility and ease of concealment – that most worry arms control advocates concerned about the diversion of TNW to terrorists. In the view of Russian military commanders, uncertainty regarding the number and location of Russia's nonstrategic weapons limits the confidence of Western militaries that they can destroy them in a first strike. Such considerations weigh against

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proposals to consolidate Russia's TNW in a few highly secure locations, even if dispersal makes them more vulnerable to terrorists.

Given the many benefits that the Russian government derives specifically from its TNWs, Russian officials would likely require major NATO concessions to reduce or restrict them. In return for any agreement, Russian officials would probably try to extract compensating concessions from Western governments, such as restrictions on the deployment of NATO missile defenses, attack aircraft or other military forces near the Russian border. Russian officials have also said they would seek restrictions on the nuclear arsenals of other parties, especially Britain and France. Perhaps the most likely Russian goal would be to similarly constrain U.S. nonstrategic nuclear weapons based in Europe.

In terms of the TNW negotiation forum, TNW arms control could be discussed in bilateral Russia-U.S. talks devoted solely to that issue, but Moscow has always resisted that approach. Washington's NATO allies would not welcome their exclusion either, though the United States would presumably solicit their concerns as well as those of other partners – such as Asian countries concerned that Russia would simply relocate its tactical nuclear weapons to their region – as it did in the INF negotiations during the 1980s.

Discussions of TNW limitations could also be included in the New START follow-on negotiations, which would cover various issues set aside in the rush to negotiate the recently signed treaty. But that format would make it harder to address Russian objections regarding NATO's superior conventional forces in Europe, which, Moscow argues, require Russia to retain superior tactical nuclear forces pending a new CFE Treaty.

European TNWs could also be dealt with as part of the NATO-Russia dialogue regarding a new European security architecture, which Moscow hopes will result in a new European Security Treaty along the lines of the draft text proposed by Russian President Dmitry Medvedev. These could occur within the framework of the NATO-Russia Council (NRC), though NATO officials in the past have not seen the NRC as an appropriate forum for TNW negotiations.

In any case, the allies would need to assess whether they can accept a persistent Russian superiority in TNWs if Moscow declines to reduce to zero. A proportionate cut in the parties' arsenals would have Russia eliminate more TNWs than the United States but still leave a numerical imbalance in Moscow's favor. Proposals for less-than-total reductions might be more acceptable if such an agreement were treated as an interim solution and resulted in a net decrease in Russia's aggregate superiority, a more secure and transparent Russian TNW arsenal, and an effective NATO capacity to employ whatever TNW it did maintain, thereby making threats of TNW retaliation theoretically credible.

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Proposed "transparency enhancements" could include declarations about the size, location and anticipated future changes in Russian or U.S./NATO TNW stockpiles. A recurring suggestion is to relocate TNW away from frontline forces by concentrating them in a specified number of distinct storage sites accessible to arms inspectors. In contrast, a complete ban could involve a separate agreement that applied to certain regions or globally. The latter option could include extending the provisions of the bilateral [Intermediate-Range Nuclear Forces] INF Treaty to encompass both shorter-range missiles and additional countries.

Even if the parties are unable to secure the elimination of all NATO and Russian TNW, or if some weapons were exempt from the transparency arrangements to enhance deterrence through increased uncertainty, limited mutual TNW reductions could provide several advantages. These include decreasing the number of possible terrorist targets; reducing modernization costs; allowing NATO to remove the TNWs from countries no longer eager to base them; and demonstrating NATO and Russian commitment to making progress toward nuclear nonproliferation.

Whatever the terms of any settlement, its verification would prove extremely difficult since both the attack aircraft that NATO uses as its main delivery system for nonstrategic nuclear weapons and the short-range missiles that Russia favors for TNW use are typically dual-use systems that can also launch conventional strikes.

The most ambitious proposals would seek high transparency levels through comprehensive verification and monitoring of TNW arsenals by means of extensive data exchanges and on-site inspections. But such plans run against the recent trend of Russia and the United States seeking to reduce verification obligations in order to limit implementation costs of arms control treaties.

More importantly, any proposals for increased transparency or TNW consolidation would need to overcome Russian fears about NATO pre-emption, since placing the weapons in a few designated places would make them easier to attack, creating opportunities – and incentives – for a pre-emptive first strike aimed at destroying the weapons before they could be dispersed to their launch sites.

The complex and interlocking barriers to reaching an agreement converge toward a simpler but persistent obstacle: Securing deep cuts in Russia's TNW arsenal, as well as resolving the related dispute between Russia and NATO over U.S. missile defenses, might not be possible until the underlying causes of Russian concerns – fears of a NATO attack – considerably decrease.

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House Panel Approves Amendments on New START Implementation

Global Security Newswire, 12 May 2011; ***www.globalsecuritynewswire.org***

The U.S. House Armed Services Committee on Thursday approved legislation containing provisions that might restrict the Obama administration's ability to implement a new Russian-U.S. nuclear arms control deal. By a 60-1 morning vote, the Republican-dominated panel approved the fiscal 2012 defense authorization bill. Representative John Garamendi (D-Calif.) was the lone dissenting vote.

The $553 billion measure covers spending on military programs for the fiscal year that begins on October 1. That amount matches the request made by the White House in February.

The committee on Wednesday approved – largely along party lines – four amendments that GOP lawmakers said were designed to hold the Obama administration to nuclear complex modernization pledges in implementing the successor agreement to the 1991 Strategic Arms Reduction Treaty. However, committee Democrats asserted that these provisions could instead tie the president's hands in carrying out the New START pact.

The treaty, which entered into force early this year, requires each side to cut its fielded strategic nuclear weapons to 1,550 warheads, down from the ceiling of 2,200 demanded by the 2002 Moscow Treaty. It also limits each nation's deployed nuclear delivery vehicles to 700, with another 100 platforms in reserve.

To help attract Republican support in the U.S. Senate for New START ratification last year, the White House pledged to invest $85 billion over the next decade to build new nuclear research facilities and service aging warheads. The treaty was approved in a 71-26 vote of the Senate last December, with 13 Republicans favoring ratification.

One amendment now included in the authorization bill would prevent the White House from spending funds between 2011 and 2017 to retire any nuclear warhead covered by the latest pact unless the Defense and Energy secretaries provide joint certification that the remaining arsenal is being modernized.

The measure, sponsored by Representative Doug Lamborn (R-Colo.), would also ban unilateral reductions in deployed or nondeployed U.S. nuclear weapons below the levels set by the treaty.

In addition, the amendment prohibits the administration from making any cuts to what Republican panel members dubbed the nuclear "hedge force" until the Chemistry and Metallurgy Research Replacement site at the Los Alamos National Laboratory in New Mexico

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and the Uranium Processing Facility at the Y-12 National Security Complex in Oak Ridge, Tennessee, are operational. The Associated Press reported the United States has roughly 3,000 nondeployed strategic warheads.

The panel also approved a measure offered by Representative John Fleming (R-La.) that would require the president to notify Congress before adopting any new nuclear targeting strategy that would put enemy cities at risk. The amendment reflects growing concern among Republican lawmakers that the Obama administration might alter the nation's nuclear warfighting approach as it contemplates future stockpile reductions.

Republicans argued changing the targets from enemy military installations to populated cities would be immoral and constitute a huge change from the present strategy. Their Democratic colleagues largely rejected this assertion, saying that the U.S. nuclear strategy for years has comprised a mix of "countervalue" and "counterforce" targets.

The authorization bill also includes a requirement put forward by Armed Services Strategic Forces Subcommittee Chairman Michael Turner (R-Ohio) that would prevent any international agreements from limiting a U.S. antimissile system unless authorized by a future treaty or congressional action. This restriction would apply to any arrangements made during the implementation of New START, such as in the U.S.-Russian Bilateral Consultative Commission.

While New START did not propose any curbs on missile defense, Moscow issued a unilateral statement declaring it could withdraw from the accord if it determined that its nuclear deterrent was threatened by the buildup of U.S. antimissile operations. At the time, some Republican lawmakers seized on the statement to speculate that U.S. negotiators had cut a secret deal to rein in future missile defense plans, a charge that the Obama administration has firmly denied.

Turner also successfully offered another amendment to the defense authorization legislation – this one blocking the United States or NATO from unilaterally cutting Washington's tactical nuclear weapons in Europe unless certain conditions are met, including a host nation or high-level alliance request.

The four GOP amendments relating to the New START agreement that passed the House committee last night were all based on wording in Turner's so-called "New START Implementation Act." Three provisions from the Turner measure were already incorporated into the House committee chairman's mark. Similar legislation was filed this week in the Senate by Minority Whip Jon Kyl (R-Ariz.).

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During the House committee debate, Democrats – led by Strategic Forces Subcommittee Ranking Member Loretta Sanchez (Calif.) and Rick Larsen (Wash.) – argued that the various strategic forces amendments amounted to nothing more than a power grab by GOP members. "Congress did have its say; it just didn't happen to be this chamber of Congress that had its say with the New START," Larsen said.

The Senate has yet to pass its version of the spending plan. Once that chamber acts, the two measures will have to be reconciled in conference, where many of the newly minted stipulations related to treaty implementation are not expected to survive.

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