Feature Item: “ISIL/Da’esh and ’Non Conventional’ Weapons of Terror”. Authored by political analyst Beatrix Immenkamp; published by the European Parliamentary Research Service (EPRS); December 2015, 10 pages.

The European Union and its Member States must prepare for the possibility of a chemical or biological attack on their territory by the self-styled ‘Islamic State’ in Iraq and the Levant (known variously as IS, ISIS or ISIL, and by the Arabic acronym ‘Da’esh’). Since the beginning of October 2015, terrorist attacks in Ankara, the Sinai Peninsula, Beirut, Paris and Tunis, for which ISIL/Da’esh has claimed responsibility, have cost the lives of 500 people. Immediately following the latest attack in Paris, the jihadist terrorist group threatened further attacks in European cities.

ISIL/Da’esh has vowed that future strikes will be more lethal and even more shocking. This has prompted experts to warn that the group may be planning to try to use internationally banned weapons of mass destruction in future attacks.

U.S. Nuclear Weapons

1. Poland Considering Asking for Access to Nuclear Weapons under Nato Program
2. Polish Defense Minister Denies Wanting US Nukes after Deputy Says Otherwise
3. Moscow Warns against Potential Threats and Risks due to US Nuclear Presence in Europe

U.S. Counter-WMD

1. U.S. Military Commander Sees S. Korea as Possible Candidate for THAAD Deployment; Report
2. New US Ballistic Missile Defense System Tested Successfully

U.S. Arms Control

1. US, Russian Prompt Global Strike Development Can Enhance Arms Control Talks
2. Russia Puts Yars Ballistic Missile Systems on Combat Alert Southwest of Moscow
3. Putin Calls for Improvement in Effectiveness of Nuclear Forces, Air Defense

Homeland Security/The Americas

1. US to Develop Machines to Destroy Chemical Weapons in the Field
Asia/Pacific

1. North Korea Test Site Activity Could Be Bluff, Nuclear Ban Monitor Says
2. U.S. Slaps Sanctions on Individuals, Companies Linked to DPRK’s Weapons of Mass Destruction Programs
3. Russian Pacific Fleet to Get First Yasen Sub 2017-2018 — Deputy Commander
4. North’s Submarine is Reported Marred in Test
5. N.K. Claims to Have Developed H-Bomb
6. Expert: No Facts to Evidence Pyongyang’s Possession of Hydrogen Bomb
7. China Flight Tests Multi-Warhead Missile

Europe/Russia

1. Deliveries of S-300 Missiles to Iran Under Way – Putin’s Aide
2. Nuclear Sub Back on Patrol after £350m Refit
3. Bombs Away: Trident Launch-Pads Are Being Built Before MPs Have Approved Renewal
4. Russia Deployed Two S-400 Air Defense Missile Regiments in Arctic in 2015 — General Staff
5. Europe Must ‘Prepare For the Possibility’ of an ISIS Chemical Attack: Report
7. ‘Hopefully, No Nukes Will Be Needed’ against ISIS – Putin
8. Russia Rules Out Use of Nuclear Weapons Against Terrorists in Syria

Middle East

1. MP Vices Dismay at IAEA Report over Repetition of Alleged PMD
2. Iran, P5+1 Agree Draft IAEA Resolution Closing Iran’s Nuclear Dossier — Russian Diplomat
3. President Rouhani: Gov’t Determined to Reinvigorate Iran’s Military Power More Than Predecessors
4. Iran Tests another Mid-Range Ballistic Missile in Breach of UN Resolutions
5. Eased Sanctions Will Permit Iran to Export Oil to North Korea: Report
6. Velayati: Reopening of PMD Case ‘Welshing on the JCPOA’
7. IAEA Says Board of Governors Will Consider Iran Report on Dec 15
8. Washington: Iran’s Missile Tests No Breach of JCPOA
9. Iran Atomic Chief Confirms Secret Meeting held with US Counterpart

India/Pakistan

1. Pakistan Test-Fires Nuclear-Capable Shaheen-III Ballistic Missile

Commentary

1. Commentary: Align US Strategic Forces to New Russian Realities
2. China’s Rapidly Expanding Centrifuge Enrichment Capacity
3. Nuclear Command & Control System: Modernization Necessary to Keep President Informed
4. Do More Nukes really Mean More Nuclear Crises? Not Necessarily
5. China-NK Ties Adapt to New Condition

Return to Top
The Guardian (U.S. Edition) – New York, NY

**Poland Considering Asking for Access to Nuclear Weapons under Nato Program**

*Deputy defence minister says Poland is discussing whether to join other European countries in hosting nuclear arms to strengthen defences*

Associated Press (AP)

Sunday, 6 December 2015

Poland’s deputy defence minister has said the ministry is considering asking for access to nuclear weapons through a Nato program in which non-nuclear states borrow the arms from the US.

Tomasz Szatkowski said the ministry was discussing whether to ask for access to Nato’s “nuclear sharing” program to strengthen the country's ability to defend itself.

Polish media said Szatkowski’s comments on Saturday to the private broadcaster Polsat marked the first time a Polish official has indicated the country wants to join the program.

Among Nato's 28 members there are three nuclear powers – the US, France and Britain – but only the US has provided weapons to allies for nuclear sharing.

Belgium, Germany, Italy, the Netherlands and Turkey have hosted nuclear weapons as part of the program.

[http://www.theguardian.com/world/2015/dec/06/poland-considering-asking-for-access-to-nuclear-weapons-under-nato-program](http://www.theguardian.com/world/2015/dec/06/poland-considering-asking-for-access-to-nuclear-weapons-under-nato-program)

RT (Russia Today) – Moscow, Russia

**Polish Defense Minister Denies Wanting US Nukes after Deputy Says Otherwise**

7 December 2015

The Polish Defense Minister has denied his country is seeking to deploy US nuclear weapons on its territory. The idea was mentioned by the minister’s deputy on Saturday.

The NATO alliance allows non-nuclear countries to borrow US missiles.

Deputy Defense Minister Tomasz Szatkowski made the statement during an interview with the private Polish broadcaster Polsat, as cited by AP. He said that the ministry is contemplating whether to ask for access to the nuclear sharing program, which would allow Warsaw to boost its defenses with nukes.

This is the first time that a Polish official has voiced an intent to host nuclear weapons on the country’s soil.

However, the Polish Defense Ministry issued a statement on Sunday that Warsaw has not asked for and is not looking to host NATO nuclear weapons on its territory.

Former Polish Defense Minister Tomasz Siemoniak (2011-2015) said that talks about his country's possible participation in the Nuclear Sharing program had tainted the nation's image.
“The last few days have become a great pity for Poland’s credibility. The world is looking at us. If we continue to hold a debate on access to nuclear weapons, the allies will not lend even a PlayStation, let alone serious weapons,” Siemoniak said.

Three NATO member states possess nuclear arsenals of their own: France, the UK and the US. Other countries could take part in the US-led Nuclear Sharing program, which involves hosting part of the US nuclear arsenal on a country’s territory in return for that country receiving training on how to handle and put to use nuclear weapons.

Poland has been one of NATO’s staunchest allies, since joining the alliance in 1999. It has also been keen to establish further links and in September Poland’s parliament gave the green light to President Andrzej Duda to ratify a technical agreement on establishing a US anti-missile base in Redzikowo. Under the NATO-backed plan, the facility should be operational by 2018.

The agreement in question is a part of a much-debated NATO-backed plan that was first agreed on by the US and Poland in 2008. At that time, it was claimed that the base was necessary to counter the risk of a possible missile attack from Iran or North Korea. However, an agreement has been reached with Tehran about a peaceful end to Iran’s nuclear ambitions.

“We all probably remember that in April 2009 in Prague [US] President [Barack] Obama said that if the Iran nuclear program issue is sorted out, then the task of creating the European segment of the missile defense system would disappear,” Russia’s foreign minister, Sergey Lavrov, said adding that Washington’s missile defense plans had no justification anymore.

After winning the Polish presidential election in May, one of Duda’s first moves was to call for more NATO troops to be stationed in the country.

“We do not want to be the buffer zone. We want to be the real eastern flank of the alliance … Today, when we look at the dispersion of bases … then the borderline is Germany,” the conservative Polish President told The Financial Times in August.

“NATO has not yet taken note of the shift of Poland from the east to the west. NATO is supposed to be here to protect the alliance … If Poland and other central European countries constitute the real flank of NATO, then it seems natural to me, a logical conclusion, that bases should be placed in those countries,” he added.

However, if the plan does go ahead, it is likely to produce a fierce rebuke from Moscow. Russian President Vladimir Putin said in June that if NATO threatens Russia, Moscow will respond to the threat accordingly.

“If someone threatens our territories, it means that we will have to aim our armed forces accordingly at the territories from where the threat is coming. How else could it be? It is NATO that approaching our borders, it’s not like we are moving anywhere,” he said.


Moscow Warns against Potential Threats and Risks due to US Nuclear Presence in Europe

The United States is planning to retool its nuclear arsenal deployed in Europe with new universal B61-12 bombs capable of carrying a nuclear charge by 2020.

December 11, 2015
MOSCOW, December 11 /TASS/. The presence of US nuclear weapons in Europe and the modernization of this arsenal is creating potential threats and risks and is reducing the threshold for using these weapons, Mikhail Ulyanov, the head of the Russian Foreign Ministry department for non-proliferation and arms control, told TASS on Thursday.

"We believe that NATO's notion of 'nuclear sharing' ("joint nuclear missions") contradicts the letter and spirit of the Nuclear Non-Proliferation Treaty," he said.

Approximately a month ago, the US tested a new universal B61-12 bomb capable of carrying a nuclear charge. The United States is planning to retool its nuclear arsenal deployed in Europe with these bombs by 2020.

"First, it is an NPT violation, which is becoming long-term for decades ahead. Second, potential threats and risks are also going up while the threshold of using nuclear weapons is lowered for objective reasons," Ulyanov said.

http://tass.ru/en/politics/843170

The Korea Herald – Seoul, South Korea

U.S. Military Commander Sees S. Korea as Possible Candidate for THAAD Deployment: Report

December 10, 2015

South Korea is a possible candidate for the deployment of a THAAD missile defense battery aimed at guarding against regional threats, primarily from North Korea, a top U.S. military commander was quoted Wednesday as saying.

U.S. Army's Pacific Commander Gen. Vincent Brooks made the remark during a meeting with defense reporters Tuesday, saying the Army is pushing to have the THAAD unit deployed on the Pacific island of Guam remain there on a permanent basis, instead of the current rotational deployment.

A permanent station on Guam "will make it possible for us to have more options for commitment of THAAD in other places if asked," Brooks said, according to the defense news outlet Military.com. One of those other possible places was South Korea, though "we haven't been asked to do that," he was quoted as saying.

The website also reported that political sensitivities have thus far limited negotiations between Washington and Seoul on putting a THAAD system on the peninsula out of concern that China would see the placement in South Korea as a threat to its own security interests and the interests of its North Korean ally.

The U.S. Army deployed the THAAD battery to Guam in 2013 to cope with war threats from North Korea.

It is no secret that the U.S. also wants to deploy a THAAD unit to South Korea, where some 28,500 American troops are stationed, to better defend against ever-growing threats from North Korea’s ballistic missile and nuclear programs.
But the issue has become one of the most sensitive for South Korea because China sees a potential THAAD deployment as a threat to their security interests and have increased pressure on Seoul to reject such a deployment.

Seoul and Washington have maintained they have never held any formal consultations on the issue. "No decisions have been made on upcoming deployments of THAAD," Cmdr. Bill Urban, a U.S. Defense Department spokesman, told Yonhap News Agency.

Last week, Japan's defense minister reportedly said during a visit to Hawaii that the country is considering deploying a THAAD unit to defend against North Korea's missile threats.

The Pentagon spokesman declined comment on the possible impact of a THAAD deployment to Japan. "We won't speculate on the impact of future decisions," he said. (Yonhap)


RT (Russia Today) – Moscow, Russia

**New US Ballistic Missile Defense System Tested Successfully**

11 December 2015

Aegis Ashore, a ground-based ballistic missile defense system (BMDS), passed an interception test off the coast of Hawaii late Wednesday. Military planners expect it to be located in Europe in 2018, citing Iran's capabilities as cause for further build-up.

"The primary purpose of the test, designated Flight Test Operational-02 Event 1a, was to assess the operational effectiveness of the Aegis Ashore capability as part of a larger BMDS architecture," the US Missile Defense Agency (MDA) said in a statement, referencing ballistic missile defense systems more frequently used on US Navy warships, as opposed to being ground-based like Aegis Ashore.

The Aegis Ashore Missile Defense Test Complex, owned by military contractor Lockheed Martin and located southwest of Kauai, Hawaii, at the US Navy’s Pacific Missile Range Facility, fired a Standard Missile-3 Block IB, made by military contractor Raytheon, at a target launched by a US Air Force C-17. Raytheon radar spotted the target, transmitting its coordinates to the Aegis Ashore system.

"Today's test demonstrated that the same Aegis Ballistic Missile Defense capability that has been fielded at sea and operational for years, will soon be operational ashore as part of the European Phased Adaptive Approach (EPAA) Phase 2 capability in Romania," MDA director Vice Adm. James Syring said in a statement.

The Romanian station is on track to be established by the end of the year, according to Rear Admiral Jon Hill, of Integrated Warfare Systems, who spoke to US Naval Institute News in November. It would be led from Ramstein, Germany, with a radar facility in Turkey.

In addition to its presence in Romania, another Aegis Ashore system is to be located in Poland by the end of 2018.

Riki Ellison, founder of the non-profit Missile Defense Advocacy Alliance, told Reuters the test mimicking an Iranian Ghadr-110 medium-range missile was a "significant achievement."

Russian and Chinese officials, however, take the NATO expansion as being aimed at them more than Iran, as US officials stress.


Sputnik International – Russian Information Agency

US, Russian Prompt Global Strike Development Can Enhance Arms Control Talks

Mutual Russian and US research and development of conventional prompt global strike (PGS) capabilities could help reopen new arms control talks between the two powers, experts told Sputnik.

10 December 2015

WASHINGTON (Sputnik), Leandra Bernstein — Both the United States and Russia currently have research and development aimed at the eventual deployment of long-range boost-glide weapons and hypersonic missiles capable of reaching any target in the world in less than an hour.

"I think actually there is a potential to make it [arms control talks] easier if both sides are working on the capability," Carnegie Nuclear Program co-director James Acton said.

Russia has raised concerns over the US PGS system, which it says could threaten Russia’s strategic deterrent. The United States has also voiced comparable concerns over Russia’s arsenal of tactical nuclear weapons, arguing it threatens strategic balance.

"I think there is a simple solution to this problem, which is we should treat conventional boost-glide weapons like nuclear weapons in arms control treaties," Acton said.

Former US Commander of Strategic Command Gen. Robert Kehler told Sputnik that if global positioning system capabilities are eventually fielded "it would count against arms control agreements."

Kehler further stated that despite US and Russian mutual concerns over the PGS capabilities, "I think there is a mechanism for a dialogue and... a way forward to work between the two countries."

In September 2014, the Russian Defense Ministry announced publicly it was working on prompt global strike capabilities. Both the US and Russian programs are still under development and are not expected to be deployable for at least another decade.

The first US hypersonic cruise missile test took place in August 2014, and ended in failure when the missile veered off course.

http://sputniknews.com/analysis/20151210/1031507911/prompt-global-strike.html
TASS Russian News Agency – Moscow, Russia

Russia Puts Yars Ballistic Missile Systems on Combat Alert Southwest of Moscow

December 11, 2015

MOSCOW, December 11. /TASS/. Yars ballistic missile systems have been put on full combat alert in Kozelsk, a town located some 220 kilometers southwest of Moscow, Lieutenant General Sergey Siver, commander of the Vladimir missile unit, said on Friday.

"The missile regiment of the Kozelsk unit equipped with the state-of-the-art Yars missile system has been put on full combat alert," he said.

"The key characteristic of this system is guaranteed suppression of anti-missile defense systems and, if necessary, causing irreparable damage to the enemy," he added.


Return to Top

Sputnik International – Russian Information Agency

Putin Calls for Improvement in Effectiveness of Nuclear Forces, Air Defense

Vladimir Putin stated that Russia must upgrade its air defense system and strengthen the strategic nuclear forces.

11 December 2015

MOSCOW (Sputnik) – Russia must upgrade its air defense system and strengthen the strategic nuclear forces, Russian President Vladimir Putin said Friday.

"Special attention must be paid to strengthening the combat potential of the strategic nuclear forces, implementing space defense programs. It is necessary, as outlined in our plans, to equip all components of the nuclear triad with new arms," Putin said at a Defense Ministry Board meeting.

http://sputniknews.com/russia/20151211/1031582368/putin-air-defense.html

Return to Top

Defense News – Tysons Corner, VA

US to Develop Machines to Destroy Chemical Weapons in the Field

Agence France-Presse (AFP)

December 10, 2015

WASHINGTON — The Pentagon is going to develop two prototypes of machines that can destroy chemical weapons on the spot and avoid the complex logistics of transporting such arsenals.

Most of the 1,300 cubic meters (46,000 cubic feet) of chemical weapons that the Syrian regime handed to the international community were neutralized in 2014 on a US Navy ship, then transformed into waste that was treated in different sites around the world.

The devices now envisioned by the Pentagon will allow for such weapons to be destroyed in situ, according to a statement from DARPA, the Defense Advanced Research Projects Agency, which has awarded contracts to build the prototypes.

Such chemical agents will be able to be transformed into "safe output," the statement said.
Current methods like incineration or hydrolysis – breaking a molecule's bonds though the use of water – require a lot of water and create hazardous waste that requires further processing, it added.

Two companies – SRI International based in Menlo Park, California, and Southwest Research Institute in San Antonio, Texas – won the contracts.

Syria agreed to give up its chemical arsenal in 2013 under the terms of an international agreement after outrage over use of such arms in attacks that killed hundreds of civilians.


Channel NewsAsia – Singapore

**North Korea Test Site Activity Could Be Bluff, Nuclear Ban Monitor Says**

*Heightened activity at a North Korean nuclear test site could be a bluff rather than preparations to set off an atomic device soon, the head of an international body set up to monitor a ban on nuclear testing said on Monday.*

 Reuters
 07 December 2015

SEUL: Heightened activity at a North Korean nuclear test site could be a bluff rather than preparations to set off an atomic device soon, the head of an international body set up to monitor a ban on nuclear testing said on Monday.

A report by 38 North, a North Korea project at Johns Hopkins University in Washington, said satellite images showed construction of a test tunnel at Punggye-ri, on North Korea’s east coast where it conducted its three previous nuclear tests.

"I'm tempted to believe that the fourth tunnel is just a bluff to put pressure on the international community to resume discussion with them," Lassina Zerbo, head of the Comprehensive Nuclear-Test-Ban Treaty Organisation (CTBTO), told Reuters.

North Korea has conducted three underground nuclear tests since 2006.

The last, in 2013, drew international condemnation including from China, its main diplomatic ally. Isolated North Korea is under U.N. sanctions that prohibit trade that can fund its arms programme. Diplomatic talks amongst six countries including the United States and North Korea aimed at ending its nuclear programme produced a deal in 2005 from which the North has since walked away.

North Korea has been steadily working on its nuclear programme, but a fourth test is not seen as imminent.

While a new tunnel at the site could well indicate North Korea was preparing a test, the timing would "probably depend on political factors more than technical ones", said Jeffrey Lewis, author of the 38 North report.
The North's agreement with South Korea in August to work towards easing tension and improving ties also meant a test was less likely, said Zerbo.

"One would not anticipate that North Korea would go for new testing at a time when they are engaged in discussions with their brothers from the South," Zerbo said.

"In the 21st century, they are the only country to have conducted a nuclear test explosion. In the 21st century, the world is too civilised for anyone to resume testing".

More than 160 countries have ratified the Comprehensive Nuclear-Test-Ban Treaty since 1996. India and Pakistan have also conducted nuclear tests since then and are among eight countries including the United States and China preventing the treaty’s entry into force.


Xinhua News – Beijing, China

**U.S. Slaps Sanctions on Individuals, Companies Linked to DPRK's Weapons of Mass Destruction Programs**

English.news.cn

December 9, 2015

WASHINGTON, Dec. 8 (Xinhua) -- The U.S. has imposed economic sanctions on six financiers and three shipping companies for supporting Democratic People's Republic of Korea (DPRK)'s "weapons proliferation and illicit finance efforts," the U.S. Treasury Department announced Tuesday.

The action to six individuals and three entities "is designed to counter attempts to circumvent U.S. and U.N. sanctions" and to prevent DPRK government "from accessing the U.S. financial system," said Treasury Department in a press release.

The Treasury Department alleged these individuals and entities are linked to DPRK's "procurement of weapons of mass destruction-related materials and proliferation activities."

The sanctioned individuals were associated with the Foreign Trade Bank, DPRK's primary foreign exchange bank, and Tanchon Commercial Bank, a financial arm of the Korea Mining Development Trading Corporation. The three shipping companies are sanctioned for using deliberate and evasive methods to conceal and ship arms and related material into DPRK, the Treasury Department alleged in the statement.

According to the Treasury Department's designation, "any property or interest in property of the designated persons in the possession of U.S. persons or within U.S. jurisdiction must be frozen.” U.S. citizens are also prohibited from conducting business with these designated persons.

TASS Russian News Agency – Moscow, Russia

**Russian Pacific Fleet to Get First Yasen Sub 2017-2018 — Deputy Commander**

*A TASS article from December 9, 2015*

At the moment the Russian Navy has only one Yasen type submarine - The Severodvinsk - which is organic to the Northern Fleet

December 09, 2015

VISHAKHAPATNAM, India December 9. /TASS/. Russia’s Pacific Fleet will get the first multi-role nuclear-powered Yasen class submarine in 2017-2018, the fleet’s deputy commander, Rear Admiral Andrey Ryabukhin, has told TASS. He is taking part in the on-going joint Russian-Indian naval exercise Indra-2015.

"We will get it and we are looking forward to the day, but this is a little bit more remote perspective,” he said. "We’ll have it in a year or two."

Ryabukhin recalled that in 2015 the Pacific Fleet was complemented with the newly-built strategic nuclear powered submarine of the Borei class - The Alexander Nevsky. Its identical twin, The Vladimir Monomakh, will arrive in the Kamchatka Peninsula in 2016.

The Pacific Fleet is being reinforced with new corvettes of project 20380, Bal and Bastion coastal missile systems, upgraded Ilyushin-38 patrol planes and Pantsir and S-400 Triumf air defense systems.

At the moment the Russian Navy has only one Yasen type submarine - The Severodvinsk - whose construction began back in 1993 and which was handed over to the military for test operation at the end of 2013. At the moment it is organic to the Northern Fleet. The next submarine, The Kazan, is being built under an updated project 885M. Its construction began in 2009. The Navy hopes to have it in 2017.


Korea JoongAng Daily – Seoul, South Korea

**North’s Submarine is Reported Marred in Test**

BY KANG JIN-KYU

December 10, 2015

A North Korean submarine mobilized to launch ballistic missiles underwater suffered serious damage last month after a failed test, according to the *Washington Free Beacon*, an online news outlet specializing in politics and security.

Citing unnamed American defense and intelligence officials, the site reported Wednesday that the Sinpo-class submarine deployed on Nov. 28, in the East Sea near the coastal city of Wonsan had been damaged after it failed to properly eject and launch a ballistic missile.

The report added that it was believed North Korean leader Kim Jong-un had been present at the launch, referring to its sources.
The report bolsters assessments in Seoul that Pyongyang has hit a significant setback in its submarine-launched ballistic missile (SLBM) program.

It was earlier reported in the media that North Korea appeared to have botched its SLBM test after debris of from the capsule covering the missile was captured in satellite images on the ocean’s surface.

However, it’s possible that the drill never intended for the rocket to penetrate the ocean’s surface and that North Korea was instead merely focusing on the capsule’s functionality.

If U.S. intelligence on the damage to the submarine is correct, it would indicate that the North did intend to launch the missile above water but botched the test-run.

The North’s test-fire on Nov. 28 came six months after Pyongyang boasted that Kim had overseen the successful test-launch in May of a missile from underwater.

The origins of a missile launched from underneath the ocean are much harder to detect than those launched on land; Pyongyang’s pursuit of an SLBM program is in strict violation of UN Security Council resolutions.


Return to Top

The Korea Herald – Seoul, South Korea

N.K. Claims to Have Developed H-Bomb

By Shin Hyon-hee

December 10, 2015

North Korean leader Kim Jong-un has claimed the communist state has developed a hydrogen bomb, which may signal a significant advancement in its nuclear capabilities, though Seoul officials remain dubious of the claim’s veracity.

While inspecting a historic arms factory site in Pyongyang on Wednesday, Kim lauded its founder and his late grandfather Kim Il-song for testing some of the country’s maiden weapons some 70 years ago, which made possible its transformation into a “powerful nuclear weapons state capable of detonating its self-defense atomic and hydrogen bombs with which to firmly defend its sovereignty and the dignity of the people,” the official Korean Central News Agency reported Thursday.

The report appears to carry the young ruler’s first public mention of a hydrogen bomb, a technology Pyongyang is believed to have been striving to acquire, but yet to master.

Seoul’s military was skeptical of the capability, with an official saying, “It’s widely known that the North has been working on it, but it remains to be seen whether it has already achieved one, such as through a fresh nuclear test.”

An intelligence official reportedly portrayed Kim’s claim as “rhetoric,” noting that the community has been closely monitoring Pyongyang’s nuclear activities, but has no corroborating information. “We don’t believe that North Korea, which has not even succeeded in miniaturizing nuclear warheads, has the skills to build a hydrogen bomb.”
Speculation has repeatedly kindled over the Kim regime’s H-bomb capacity since it threatened a “new type of nuclear test” in March 2014. On Oct. 10 this year, it also hinted at its ongoing program, unveiling a “strategic rocket equipped with varied, miniaturized nuclear warheads” during a massive military parade marking the 70th anniversary of the establishment of the ruling Workers’ Party.

Experts have since raised the possibility of multiple explosions and the use of a uranium device, hydrogen bomb or “boosted fission weapon,” which they call a 1.5-generation atomic bomb.

In September, the Washington-based Institute for Science and International Security said what appeared to be a new “hot cell” facility possibly capable of churning out tritium was under construction at the North’s Yongbyon nuclear complex. The substance is essential to producing boosted-fission weapons, which is far more sophisticated and powerful than plutonium- or uranium-based devices the country had previously tested.

“Whether North Korea can make nuclear weapons using tritium is unknown, although we believe that it remains a technical problem North Korea still needs to solve. Solving this problem would likely require more underground nuclear tests,” the think tank said in the report.


Russia Beyond the Headlines (RBTH) – Moscow, Russia

Expert: No Facts to Evidence Pyongyang’s Possession of Hydrogen Bomb

By Interfax News Service and RBTH

December 10, 2015

The statement of North Korean leader Kim Jong-un alleging North Korea’s possession of a hydrogen bomb is a response to the U.S. economic blockade of Pyongyang but it is problematic to speak about the real combat nuclear potential of North Korea, head of the Korean Studies Center of the Russian Academy of Sciences’ Far East Institute Alexander Zhebin has said.

"This statement of Kim Jong-un is a response to Washington which is implementing the policy of financial smothering of North Korea and is trying to block foreign trade and foreign economic activity of Pyongyang. It seems the timing of this statement is not accidental, as the United States imposed additional sanctions on North Korea earlier this week," Zhebin told Interfax on Dec. 10.

"So far, these are just words uttered by the North Korean leader, a hint that Pyongyang intends to react to the U.S. position," the expert said.

As to the real grounds for the North Korean leader’s statement on the possession of a hydrogen bomb, there are no facts to evidence this so far, Zhebin said.

"Many experts doubt that North Korea may even have a serviceable nuclear warhead that can be delivered to a target. Speaking of thermonuclear weapons, one can hardly say that Pyongyang possesses them from the military and practical points of view. Such weapons have not been tested," he said.
"So far, three tests which looked nuclear have been registered. It is not ruled out that thermonuclear weapon tests might have been computer-modeled. There are such specialists in North Korea and, probably, they also have hardware for such experiments. It is a solid fact that Pyongyang has not tested thermonuclear weapons. It is also hard to imagine how this can be done in the rather limited territory occupied by North Korea," Zhebin said.

Besides, one can deem topical the assessment of North Korean nuclear potential made by U.S. servicemen three years ago. "Even the Pentagon report on North Korean nuclear potential drawn up in 2012 in line with a decision of Congress admitted that North Koreans have not made a single successful test of intercontinental ballistic missiles and their warheads," Zhebin said.

At the same time, this statement of Kim Jong-un may mean that relations between Washington and Pyongyang continue to exacerbate.

"This kind of response of North Korea means that tensions remain in the relations between Washington and Pyongyang without any signs of readiness for compromise, moreover that the confrontation has been growing. This causes concern of neighboring countries, including Russia," Zhebin said.

North Korean leader Kim Jong-un said that North Korea possessed both atomic and hydrogen bombs.

"We managed to become a great nuclear power capable of defending the independence and national dignity of our homeland by mighty nuclear and hydrogen strikes," the Korean Central News Agency (KCNA) has quoted Kim as saying on Thursday during an inspection trip to the Armed Forces.


Yonhap News Agency – Seoul, South Korea


**China Flight Tests Multi-Warhead Missile**

*New DF-41 long-range missile program advances*

By Bill Gertz

December 11, 2015

China conducted a flight test of a new multi-warhead ballistic missile capable of reaching targets throughout the United States, Pentagon officials said.

The test of the new DF-41 intercontinental ballistic missile, or ICBM, took place Dec. 4.

The latest flight test demonstrated the use of two multiple independently-targetable reentry vehicles. The missile launch and dummy warheads were tracked by satellites to an impact range in western China.

It was the second flight test this year of the new missile and the fifth since 2012. U.S. intelligence assessments suggest that the missile will be capable of carrying between three and 10 warheads. The two most recent missile flight tests took place Aug. 6, also with two dummy warheads, and on Dec. 13, 2014.
Cmdr. Bill Urban, a Pentagon spokesman, declined to comment on the latest test. "We do not comment on specific PRC weapons tests, but we do monitor Chinese military modernization carefully," Urban said.

The DF-41 is a road-mobile ICBM with a range of up to 7,456 miles. It is viewed by the Pentagon as China's most significant new missile that has been in development since the early 2000s.

Mark Stokes, a former Pentagon official specializing in Chinese military affairs now at the Project 2049 Institute, said that the DF-41 missile program appears to be in the advanced stage of research and development.

“A reasonable speculation is that the system adapts a modified variant of the post-boost vehicle used on the DF-5B ICBM onto a new large diameter solid rocket motor,” said Stokes. “Assuming final design certification, the missile system could enter the Second Artillery's operational inventory within the next five years.”

Rick Fisher, an expert on the Chinese military, said the test of two warheads indicates that Beijing may be seeking to mask the full warhead load of the new missile.

“It appears that China is pursuing a modest test schedule and the use of a low number of reentry vehicles may indicate a desire to conceal the full capability of the DF-41,” he said.

Fisher said testing the new missile with a small number of warheads allows Chinese missile engineers to expand the warheads' trajectory. The test data can then be used in developing missiles with more warheads.

Based on the robust testing schedule for the DF-41, China is expected to deploy the missile in the next two years, Fisher said.

China obtained multiple-satellite launching technology from the United States during the 1990s through illicit space cooperation. The technology is believed to have formed the basis for the multiple warhead bus used on the DF-41.

The Pentagon’s latest annual report on China’s military states that current DF-31 and DF-31A missiles can reach “most locations within the continental United States.”

The DF-41, however, will provide full coverage for nuclear strikes on the United States, defense officials said.

China’s expansion of its current limited strategic missile forces into multiple warhead configurations marks a significant expansion of Beijing’s nuclear program.

China is currently engaged in a large-scale nuclear forces build-up from its current warhead stockpile, currently estimated to be around 300 warheads.

Outfitting its large force of strategic missiles with multiple warheads is likely to increase the number of warheads sharply.

China’s long-range strategic missile forces currently include DF-31, DF-31A, DF-4, and DF-5 ground-based missiles, and JL-1 and new JL-2 submarine-launched missiles.

A congressional commission on China in 2014 stated that “Despite the uncertainty surrounding China’s stockpiles of nuclear missiles and nuclear warheads, it is clear China’s nuclear forces over the next three to five years will expand considerably and become more lethal and survivable with the fielding of additional road-mobile nuclear missiles; as many as five JIN [missile submarines],
each of which can carry 12 JL–2 submarine-launched ballistic missiles; and intercontinental ballistic missiles armed with multiple independently targetable reentry vehicles (MIRVs).”

In a related development, a spokeswoman for Adm. Cecil Haney, commander of the U.S. Strategic Command, confirmed this week that China has begun operational patrols with nuclear missile submarines.

Navy Capt. Pamela S. Kunze, the Stratcom spokeswoman, elaborated on comments by Adm. Cecil Haney, the Strategic Command commander, regarding the anticipated submarine patrols in a statement to the Washington Times.

“Given China’s known capabilities and their efforts to develop a sea-based deterrent, in absence of indicators to the contrary, it is prudent to assume that patrols are occurring,” she said.

Haney said in October that while the Chinese have not announced the missile submarine patrols, some of the four Jin-class submarines have been seen this year.

“So I have to look at it as operational capability today,” Haney told reporters Oct. 22.

China has not announced it is conducting nuclear-missile submarine patrols and U.S. intelligence agencies remain uncertain as to whether China has deployed nuclear-tipped JL-2 missiles on the Jin-class submarines.


The Moscow Times – Moscow, Russia

Deliveries of S-300 Missiles to Iran Under Way – Putin’s Aide

The Moscow Times

December 04, 2015

Russia has begun deliveries of its advanced S-300 anti-aircraft missile systems to Iran, presidential aide Vladimir Kozhin was quoted by the state-run TASS news agency as saying Thursday.

“The contract is in action … it has begun,” said Kozhin, who advises President Vladimir Putin on military-industrial trade with foreign nations.

The head of Russian defense and technology holding Rostec, Sergey Chemezov, said in early November that the contract had been signed, but did not specify when deliveries would begin.

Putin in April lifted a presidential ban on the delivery of S-300 missile systems to Iran, which was put in place by then-President Dmitry Medvedev in 2010 after the United Nations imposed sanctions on Iran for its nuclear program.

Iran filed a lawsuit against Russian state arms export agency Rosoboronexport in 2010 for violating its $800 million contract for several S-300 units. The new contract stipulates that Iran will withdraw its suit after the first stage of the contract is fulfilled.


Nuclear Sub Back on Patrol after £350m Refit

_The nuclear-weapon-equipped sub leaves port with a new reactor core, better missile launch kit and the latest computer systems._

4 December 2015

One of Britain’s 15,000-ton nuclear submarines has returned to roam the seas as part of the UK’s ultimate defence deterrent after a £350m refit.

HMS Vengeance - equipped with Trident missiles carrying nuclear warheads - was towed out of Plymouth’s Devonport dockyard after a four-year project involving more than two million man-hours.

The 150-metre vessel is technically able to patrol for four years as it has constant power and produces its own water and oxygen.

Its "deep maintenance period" included replacing the nuclear reactor core that generates its energy, as well as improving missile launch equipment and computer systems.

The sub sailed past HMS Vanguard on the way out of port - the sub is preparing for its own major four-year refit.

Four Vanguard-class submarines - Vanguard, Victorious, Vigilant and Vengeance - form the UK’s Trident nuclear programme.

Based at HMNB Clyde in the west of Scotland, at least one is always at sea, but their location is kept top secret.

Each vessel is also said to carry the Prime Minister's letter of last resort.

Sealed and locked in a safe, they reportedly carry instructions to the commander on what to do if the UK comes under nuclear attack and the Government is wiped out.

The high cost of replacing the submarines is a contentious issue, with the Government recently saying the cost would rise to £31bn, up from the previous estimate of £25bn.

The refit programme has provided a major boost to the local economy in Devon.

More than 2,000 local jobs have been secured by the new four-year programme to work on Vanguard.

Defence minister Philip Dunne said the £350m project means the submarines would remain in service until at least 2030.


Return to Top
The Courier – Dundee, U.K.

**Bombs Away: Trident Launch-Pads Are Being Built Before MPs Have Approved Renewal**

By Kieran Andrews

7 December 2015

The launch-pads for deadly missiles on Britain’s new nuclear submarines are being built in Fife - despite MPs still being months away from approving the renewal of Trident.

Defence Secretary Michael Fallon revealed Babcock was constructing key components of the fleet just yards away from the Queen Elizabeth aircraft carrier as he inspected the ship being constructed at Rosyth dockyard.

The SNP slammed the revelation, accusing the UK Government of “spending money for nuclear weapons which Parliament has not agreed to”.

Invergowrie-raised Mr Fallon told The Courier: “This morning I was visiting the facility here that is starting to build the missile tubes for the first Trident successor boat.

“ That is being done here, on the Forth. The first of five missile tubes for the first of the four successor boats. It’s one of the lead items and it is being built here in Scotland.

“ There are 50 employed already and that will rise to 100. That’s a very good example of, down the supply chain, Scottish companies benefit from defence expenditure.

“Scottish brain power is going to be key to our defence spending over the next few years and we want more small Scottish technology companies to bid for this kind of work.”

SNP defence spokesman Brendan O’Hara said: “The tragedy is Westminster is hell bent on spending a huge amount of money of something useless and the Tories want to rush through the maingate decision which will commit the UK to Trident for decades to come.

“Michael Fallon needs to be upfront and tell Parliament what the UK government is spending money on, and why.”

In May 2011 the UK coalition government approved the assessment phase for new submarines, and authorised the purchase of steel for the hulls.

The Liberal Democrats used their weight in the partnership to argue Trident was a waste of money. They wanted to see a continuous, at sea nuclear missile system replaced with cheaper cruise misses.

May’s General Election saw the Conservatives returned as a majority on a manifesto which includes a commitment to four new submarines.

The final decision to commit to the submarine programme is scheduled for next year and - if it goes ahead - construction will start late next year at the Barrow shipyard, with the first boat due to enter service in 2028.

http://www.thecourier.co.uk/news/politics/bombs-away-trident-launch-pads-are-being-built-before-mps-have-approved-renewal-1.914474

Return to Top
Russia Deployed Two S-400 Air Defense Missile Regiments in Arctic in 2015 — General Staff

Pantsir-S AD missile/gun system batteries have been deployed along with the S-400 regiments to provide close-in defense for the S-400s

December 08, 2015

ST. PETERSBURG, December 8. /TASS/. In 2015, Russia has activated and deployed to the Arctic two separate S-400 Triumph air defense (AD) missile regiments, a source in the Russian General Staff told TASS on Tuesday.

"Two S-400 regiments have been activated and deployed to the Novaya Zemlya Archipelago and the city of Tiksi in Yakutia this year under the program on reinforcing the 2014-formed Arctic force, with the program dubbed Northern Fleet - Unified Strategic Command," the officer told TASS during the 5th Arctic - Today and Tomorrow International Forum.

According to the source, Pantsir-S AD missile/gun system batteries have been deployed along with the S-400 regiments to provide close-in defense for the S-400s. In addition, a Bastion (SSC-5) coastal defense missile battalion has been deployed to Novaya Zemlya to defend against sea-to-shore attacks. "The units are on alert round the clock," the source stressed.

He said the coastal defense missile, AD missile and AD missile/gun units have also been deployed and placed on alert duty on all other Arctic islands and in some areas on Russia's Arctic mainland, with some elements having been stationed in Kotelny and Wrangel islands since November last year. "Aircraft control posts and radio-technical, radar and space surveillance unit positions have been established in all of their stations along the Northern Sea Route from the Kola Peninsula and Novaya Zemlya to Anadyr and Cape Schmidt in the east. All of them are on alert duty," the source added.

Protection of Arctic frontiers has been included in the list of the Russian Armed Force's tasks since 2014. Russia has also established a unified strategic command for the North.

Head of the National Defense Control Center Mikhail Mizintsev has said Russia will build 13 aerodromes, one aviation training range and 10 technical positions of radar units and aviation guidance points in the Arctic.

The Russian Defense Ministry has formed military groupings on the Novaya Zemlya archipelago, the Frantz Joseph Land Islands, the New Siberian archipelago, Wrangel Island and Cape Schmidt and has started to create seven aerodromes in Yakutia, Taimyr and Chukotka.

The army groupings have received the status of the fifth military district in Russia whose area of responsibility also includes the Northern Pole.

Russia is set to build six military cantonments in the Arctic along the western part of the Northern Sea Route. The projects are under way on the Alexander Land Island, the village of Rogachyovo on the Novaya Zemlya archipelago, the Sredny Island on the Severnaya Zemlya archipelago, Cape Schmidt and the Wrangel Island in Chukotka and on the Kotelny Island on the New Siberian archipelago.

A total of 57,700 tons of construction materials were delivered to these areas in the first half of this year and another 24,200 tons are ready for dispatch.
The Russian Arctic is protected by the advanced S-400 air defense missile system and the Pantsir-S1 missile and gun complexes. Deputy Commander of the 1st air defense division Sergey Denisov has said a radar unit has been deployed in the village of Rogachyovo on the Novaya Zemlya archipelago and an antiaircraft missile regiment will be established there. A radar unit will also be deployed on Sredny Island.


Newsweek – New York, NY

**Europe Must 'Prepare For the Possibility' of an ISIS Chemical Attack: Report**

By Jack Moore

December 8, 2015

The European Parliament released a report on Friday warning the European Union's member states to “prepare for the possibility” of a chemical attack on the continent by the Islamic State militant group (ISIS) and revealing that more than 150 cases of toxic smuggling are reported each year.

The report, entitled “ISIL/Da’esh and ‘non conventional’ weapons of terror” and authored by political analyst Beatrix Immenkamp, notes that there is a “particular risk that terrorists might use sarin, ricin or anthrax” on European soil.

“European governments and EU institutions need to be on alert, and should consider publicly addressing the possibility of a terrorist attack using chemical, biological, radiological or even nuclear materials,” the paper says.

It adds that CBRN (chemical, biological, radioactive or nuclear) substances have been “carried undetected” past the bloc’s borders, citing the 2014 European Commission report on a new EU approach to the detection and mitigation of CBRN risks.

The report does not detail specific recent cases of undetected smuggling of CBRN materials but it uses the 2006 poisoning of Alexander Litvinenko, who was spiked with polonium in London, as a previous example of such material smuggled into the EU. The report does not give details on the specific cases of chemical, biological, radioactive or nuclear material smuggling into Europe.

Following the deadly Paris attacks in November, French Prime Minister Manuel Valls warned that the country could face a chemical or bacterial attack on its soil. “We must not rule anything out,” Valls said, addressing the lower house of the French parliament. “I say it with all the precautions needed. But we know and bear in mind that there is also a risk of chemical or bacteriological weapons.”

After overrunning areas of northern Iraq last year, ISIS had “access...to bunkers from the past Iraqi chemical weapons programs” that included mustard agents and may have had access to previous programs in Libya where it expanded its control of areas of central Libya, the report adds.

ISIS has previously used chemical weapons on a number of occasions, according to groups fighting the extremist group and NGOs operating in Syria such as Médecins Sans Frontières (MSF). MSF said that ISIS had used mustard gas in northern Syria in August, after its doctors treated four patients with symptoms of exposure to chemical agents. The Kurdistan Region Security Council in northern Iraq also said in March that it has evidence of ISIS using chlorine gas against Peshmerga fighters.
Iraqi intelligence officials told the Associated Press in November that ISIS has set up a chemical weapons research unit dedicated to pursuing the creation of deadlier and more advanced toxic weapons. The group has also recruited a number of scientists who worked under Saddam Hussein, according to Hakim al Zamili, the head of the Iraqi parliament’s security and defence committee.

“Daesh (an Arabic acronym for ISIS) is working very seriously to reach production of chemical weapons, particularly nerve gas,” he said. “That would threaten not just Iraq but the whole world.”


TASS Russian News Agency – Moscow, Russia

Kalibr Sea-Launched Missiles Prove their Efficiency, Accuracy — Russian Defense Ministry

_The Kalibr sea-based cruise missiles and KAB-500 guided aerial bombs were used in the attack to destroy the Islamic State terrorists’ vital facilities_

December 09, 2015

MOSCOW, December 9. /TASS/. The Kalibr sea-launched cruise missile salvo from the Rostov-on-Don submarine on targets of the Islamic State terrorist group in Syria has proven the effectiveness of this complex, Russian Defense Ministry spokesman Igor Konashenkov said on Wednesday.

"For the first time an underwater salvo launch of the sea-based Kalibr missiles has been made by the Rostov-on-Don submarine from the Mediterranean Sea. The recent launch was carried out from submerged position from the submarine’s torpedo tubes,” he said.

Konashenkov said that a massive missile and air strike on the Islamic State infrastructure was delivered on Tuesday with the use of high-precision weapons. The Kalibr sea-based cruise missiles and KAB-500 guided aerial bombs were used in the attack to destroy the terrorists’ vital facilities.

"The available objective monitoring data have once again confirmed high efficiency of the Kalibr missile. All the targets were hit with high accuracy. It should be reminded that the range of the Kalibr cruise missiles is about 2,000 kilometers," the defence spokesman said.

According to him, missiles of this type have a low radar signature and by means of low-level terrain following they are virtually invisible to any means of air defence.

"The target hitting accuracy, despite the missile’s long range, is just a few metres. Taking into account that the warhead mass is 500 kilograms, the target is destroyed for sure," Konashenkov said.

He also said that the missile may be equipped both with conventional and special — nuclear warheads. Konashenkov said that in November, the Russian forces used, in addition to Kalibr, the latest Kh-101 air-launched cruise missiles that are capable of reliably destroying targets at a distance of about 4,500 kilometers.

Kh-101 is also virtually invisible to any air defence systems and can be equipped with both conventional and special nuclear warheads. The hitting accuracy of these cruise missiles is within a few metres.
"The Kalibr cruise missile has again proven its effectiveness at long range. We are certain that substantial damage has been inflicted on ammunition dumps, a landmine factory and, naturally, the oil infrastructure," Russian Defense Minister Sergei Shoigu told President Vladimir Putin on Tuesday.

Ships with the Russian Navy's Caspian Flotilla fired off 3M-14 submarine-launched cruise missiles (SLCM) on IS's infrastructure in Syria on October 7 and November 20. The Caspian-based ships launched a total of 44 missiles - 26 on October 7 and 18 on November 20. Obviously, the targets engaged by the Kalibr missiles could have been wiped out by the Russian air task force deployed in Hmeimim air base in Syria's Latakia province. Thus, it is probable enough that the operation against the extremist groups in Syria is running concurrently with the testing of cutting-edge Russian precision-guided munitions in combat.

"Certainly, everything should be analysed — both what takes place on the battlefield and how the weapons work. Both the Kalibr and Kh-101 missile have generally performed well. They are advanced, up-to-date, highly-effective - as we can see - precision-guided weapons that can carry both conventional and special, i.e. nuclear, warheads. Naturally, the latter are not needed in the fight against terrorists and, I hope, will never be," Putin said.

The Kalibr system is comprised of a family of the 3M-54 (SS-N-30) antiship, 3M-14 (SS-N-27 Sizzler) land-attack and 91R1/RT2 antisubmarine missiles.

The B-237 Rostov-on-Don submarine is the second one in the six-ship Project 636.3 diesel-electric family designed for the Russian Navy. It was laid down in 2011 by the Admiralty Wharves Shipyard (a subsidiary of the United Shipbuilding Corporation) and launched in 2014. The Rostov-on-Don was commissioned for service with the Russian Navy in December 2014.

The Project 636.3 diesel-electric submarines are third-generation boats derived from the Project 636 diesel-electric design. They have a low acoustic signature, a submerged speed of 20 knots, a 45-day self-sustained operation capability, a submerged displacement of about 4,000 tons, and a crew of over 50. The Project 636.3 submarines feature the Kalibr precision-guided missile system with the 3M-54 and 3M-541 antiship and 3M-14 land-attack cruise missiles and upgraded radio electronics.


Return to Top

RT (Russia Today) – Moscow, Russia

'Hopefully, No Nukes Will Be Needed' against ISIS – Putin

9 December 2015

Vladimir Putin has praised the Russian cruise missiles fired against terrorists in Syria from the sea. He expressed hope that these weapons would not have to be armed with nuclear warheads.

Meeting in the Kremlin with Defense Minister Sergey Shoigu, who reported the latest results of the anti-Islamic State (IS, formerly ISIS/ISIL) ops in Syria, the Russian president made a notable remark.

“We must analyze everything happening on the battlefield, how the weapons operate. The Kalibrs (sea based cruise missiles) and KH-101 (airborne cruise missile) have proved to be modern and highly effective, and now we know it for sure - precision weapons that can be equipped with both conventional and special warheads, which are nuclear,” Putin said.
“Naturally, this is not necessary when fighting terrorists and, I hope, will never be needed,” the president added.

On Tuesday, a Russian Kilo-class submarine, the Rostov-on-Don, fired Kalibr-PL cruise missiles against an IS installation near the terrorists’ stronghold in Raqqa. Water-to-surface cruise missiles were launched from a submerged sub in the Mediterranean Sea, according to the Russian defense minister.

“We’ve been registering the missiles launches, flights and, of course, their hitting the targets,” Shoigu said. “We warned our Israeli and American colleagues about these launches.”

Kalibr and KH-101 cruise missiles have been deployed for the first time this year in Russia’s counter-terrorist operation in Syria.

R Return to Top

Sputnik International – Russian Information Agency

Russia Rules Out Use of Nuclear Weapons Against Terrorists in Syria
The use of nuclear weapons against terrorists is impossible and there is no need for it, Russian Foreign Minister Sergei Lavrov said Wednesday.
9 December 2015
MOSCOW (Sputnik) — Lavrov said in an interview with Italian media:
"Of course not, and the president has stated this, that there is no need to use any nuclear weapons against terrorists, as they can be defeated through conventional means, and this is fully in line with our military doctrine."

Russia has been conducting airstrikes against Daesh, outlawed in Russia, in Syria since September 30 upon the request of President Bashar Assad. Russian warships in the Caspian Sea also participated in the anti-terrorist campaign, having successfully fired cruise missiles on IS targets.
R Return to Top

Islamic Republic News Agency (IRNA) – Tehran, Iran

5 December 2015

MP Vices Dismay at IAEA Report over Repetition of Alleged PMD
Semnan, Dec 5, IRNA – Head of Majlis Research Center Kazem Jalali on Saturday expressed dismay at repetition of alleged Possible Military Dimension of Iranian nuclear program in the latest report of the International Atomic Energy Agency Director-General Yukiya Amano.

'This part of the report of the IAEA on diversion and Iran's intention to make bombs by 2003 is a repeated allegation and unacceptable,' Jalali said in a statement to the inaugural ceremony of the 33rd Exhibition of Iran Nuclear Industry Achievements.
He said the Islamic Republic of Iran never experimented technical stages to manufacture bomb and the agency’s allegation about conducting such experiments between 2003-2009 is repetition of the Israeli allegation which brought the controversy between Iran and the international community over the civilian nuclear program.

He made clear that Iranian defense doctrine neither accepts acquisition of bomb nor considers it as helpful for the country and the world community.

Referring to the acceptable parts of the IAEA report on Iran, Jalali said the IAEA acknowledgement that Iran made no diversion before 2003, raises the question about the Security Council referral.

"Why so many tyrannical resolutions and sanctions were issued against Islamic Iran; all these should be addressed at an appropriate time?"

He said G5+1 states are expected to remove Iran’s case from the IAEA Board of Governors so that it would follow its regular course paving the way for implementation of Joint Comprehensive Plan of Action.


TASS Russian News Agency – Moscow, Russia

**Iran, P5+1 Agree Draft IAEA Resolution Closing Iran’s Nuclear Dossier — Russian Diplomat**

*The IAEA board of governors is to have an extraordinary meeting on December 15 to approve Director-General Yukiya Amano’s report regarding the controversial aspects of the Iranian nuclear program.*

December 07, 2015

VIENNA, December 7. /TASS/. The P5+1 group of international mediators, namely the five permanent members of the United Nations Security Council and Germany, and Iran have agreed a draft resolution for a December 15 session of the board of governors of the International Atomic Energy Agency (IAEA) that will make it possible to actually close Teheran's nuclear dossier and begin the implementation phase, Russia’s permanent representative at the Vienna-based international organizations Vladimir Voronkov said on Monday.

"Yes, it has been agreed and is now being polished. It will soon be distributed [among the members of the IAEA board of governors - TASS],” he told TASS, adding that the document bound the agency to issue quarterly reports on Iran’s implementation of the deal with the six powers.

The IAEA board of governors is to have an extraordinary meeting on December 15 to approve Director-General Yukiya Amano’s report regarding the controversial aspects of the Iranian nuclear program. The meeting will also consider a draft resolution actually closing Iran’s nuclear dossier and outlining parameters of IAEA’s further efforts on the Iranian track.

In a report circulated in early December, Amano said that Teheran had conducted theoretical studies on possible creation of nuclear weapons before 2003 but no practical steps had been done to switch nuclear materials to military uses.

After the resolution is adopted, the parties to the deal signed in Vienna on July 14, 2015 will begin the implementation phase. The sides however are to implement a number of other liabilities. Thus, Iran is to reduce from ten tonnes to 300 kilograms its reserves of uranium enriched to 3.67%, to reduce the number of first-generation centrifuges to 6,100 and place the redundant centrifuges
under IAEA control. Enrichment activities under 3.67% will be allowed at 5,060 centrifuges at the facility in Natanz.

Voronkov said earlier on Monday Russia and Iran would complete the removal of enriched uranium from Iran in exchange for natural one by the end of the year.

http://tass.ru/en/world/842108

FARS News Agency – Tehran, Iran
Monday, December 07, 2015

President Rouhani: Gov't Determined to Reinvigorate Iran's Military Power More Than Predecessors

TEHRAN (FNA) - Iranian President Hassan Rouhani underlined that military advancements and developments under his administration have been several times more than what the previous governments have done.

"There is no doubt that we should boost our military power but certain people think that the eleventh government is the government of smile, logic, negotiation and talks but is less (determined) in building weapons and defensive power," Rouhani said, addressing students at Sharif University of Technology in Tehran on Monday on the occasions of 'Students Day' in Iran.

"I have spoken about this once in the past that the government has done more in developing strategic weapons in the past two years than what had been done in the 10 years before that; therefore, our engagement in negotiations does not mean that we don't strengthen our defensive power and don't think of war at all," he added.

Rouhani underscored that Iran tested one of its most important missiles, 'Emad', concurrent with its victory in the nuclear talks with the world powers.

On October 11, Iran successfully test-fired the country's new precision-guided long-range ballistic missile that can be controlled until the moment of impact. Emad carries a conventional warhead.

"This missile (Emad) which has been fully designed and made by Iranian Defense Ministry’s scientists and experts is the country’ first long-range missile with navigation and strike controlling capability; it is capable of hitting and destroying the targets with high-precision," Iranian Defense Minister Brigadier General Hossein Dehqan told reporters after the successful test of Emad missile.

The Iranian Defense Minister reiterated that the manufacture and successful testing of Emad missile is a technological and operational jump in a strategic field, and said, "We don't ask for anyone's permission for boosting our defense and missile power; we resolutely continue our defense programs, specially in the missile field, and Emad missile is a conspicuous example."


The Iranian Defense Minister reiterated that the mass production and delivery of Emad missile to the country’s Armed Forces will considerably increase their power and tactical capabilities.
The Iranian Armed Forces have recently test-fired different types of newly-developed missiles and torpedoes and tested a large number of home-made weapons, tools and equipment, including submarines, military ships, artillery, choppers, aircrafts, UAVs and air defense and electronic systems, during massive military drills.

Defense analysts and military observers say that Iran's wargames and its advancements in weapons production have proved as a deterrent factor.

The Iranian officials have always underscored that the country's defense program cannot be affected by the nuclear deal clinched between Iran and the world powers on July 14 and the UN Security Council resolutions.


FoxNews.com – New York, NY

**Iran Tests another Mid-Range Ballistic Missile in Breach of UN Resolutions**

By Jennifer Griffin and Lucas Tomlinson

December 07, 2015

Iran has carried out a new medium range ballistic missile test in breach of two United Nations Security Council resolutions, a senior U.S. official told Fox News on Monday.

Western intelligence says the test was held Nov. 21 near Chabahar, a port city in southeast Iran's Sistan and Baluchestan Province near the border with Pakistan. The launch took place from a known missile test site along the Gulf of Oman.

The missile, known as a Ghadr-110, has a range of 1,800 – 2000 km, or 1200 miles, and is capable of carrying a nuclear warhead. The missile fired in November is an improved version of the Shahab 3, and is similar to the precision guided missile tested by Iran on Oct. 10, which elicited strong condemnation from members of the U.N. Security Council.

"The United States is deeply concerned about Iran’s recent ballistic missile launch," Samantha Power, U.S. Ambassador to the U.N., said in a statement after the last Iranian ballistic missile test in October.

President Obama mentioned the Iranian missile test during a press conference on Oct. 16 and said the United States was preparing to brief the U.N. sanctions committee. He added that it would not derail the nuclear deal.

"I think what we'll be doing is we'll review, as we have in the past, any violations of U.N. resolutions, and we'll deal with them much as we have in the past," Obama said of the October incident.

A senior administration official told Fox News on Monday the White House was "aware" of reports of the missile test, but had "no further comment at this time."

Iran appears to be in a race against the clock to improve the accuracy of its ballistic missile arsenal in the wake of the nuclear agreement signed in July.
One day after Tehran and six world powers signed that nuclear accord, the UN passed resolution 2231, which compels Iran to refrain from any work on ballistic missiles for 8 years. UN Security Council Resolution 1929 was passed in 2010 and bans Iran from conducting ballistic missile tests.

The Security Council is still debating how to respond to Iran’s last test in October.


Deutsche Welle (DW) – Bonn, Germany

Eased Sanctions Will Permit Iran to Export Oil to North Korea: Report

Pyongyang may want to pay for much-needed energy supplies with weapons and nuclear technology, analysts suggest.

By Julian Ryall, Tokyo

8 December 2015

Iran is expected to step up exports of oil to North Korea as a result of the lifting of sanctions imposed on Tehran over its efforts to develop nuclear weapons, according to a report released by the US Congressional Research Service.

Under the Joint Comprehensive Plan of Action (JCPOA), which was signed by Tehran and six world powers in July, Iran agreed to strict limits on its nuclear program in return for access to foreign markets for its exports, of which oil is a major component. Thanks to historical ties between Tehran and Pyongyang, both countries are likely to be in favor of resuming the trade in oil, possibly in a barter arrangement for weapons, according to some analysts.

"Iran and North Korea have generally been allies, in part because both have been considered by the United States and its allies as 'outcasts' or 'pariah states,' subjected to wide-ranging international sanctions," Middle East analyst Kenneth Katzman wrote in the CRS report on Iranian foreign policy.

Economic benefits minimal

And while the economic benefits to Iran of a relationship with North Korea are "minimal," the report states, the arrangement does offer Tehran some strategic gains. North Korea is one of the very few states with which Iran has formal military links, and the two regimes have cooperated on a wide range of military ventures, including sharing information on weapons of mass destruction and ballistic missile technology.

As well as an advanced nuclear weapons program, North Korea is believed to have a large biological weapons capability.

As a signatory of the Biological Weapons Convention, North Korea is prohibited from developing, producing or using biological weapons, although there have been repeated reports from South Korean intelligence that the North is able to manufacture 4,500 tons of chemical agents a year and can ramp that up to 12,000 tons a year.
The chemicals that the regime is producing include hydrogen cyanide, phosgene, sarin, tabun, chlorine and a number of agents from the mustard gas family.

It is the nuclear know-how that Iran is most likely to be seeking as its own development projects are now being strictly monitored under the terms of the JCPOA deal. With limited hard currency of its own, Pyongyang may be willing to trade knowledge for desperately needed oil.

**Oil flowing east**

"As Iran’s oil imports increase after international sanctions are removed in conjunction with the JCPOA, it is likely that additional quantities of Iranian oil might reach North Korea, either via China or through direct purchasing from North Korea," the CRS report concluded.

"Traditionally, North Korea has received most of its oil supplies from China, but the relationship has been strained in recent years," Rah Jong-yil, a former head of South Korean intelligence and an expert on the regime in Pyongyang, told DW.

The source of those tensions is rooted in the decision by the regime of Kim Jong-un to ignore pressure from Beijing to cancel the test-launch of a ballistic missile in April 2012 and, in a development that infuriated Beijing, a third underground nuclear test in February 2013.

One way in which China expressed its displeasure was to severely limit the amount of oil flowing over the border, although it is not clear whether exports halted entirely as Beijing stopped reporting oil exports to North Korea.

The North, undeterred, simply went looking for new sources of fuel and has in recent years been cultivating a closer relationship with Russia. It is possible that oil is now crossing the North Korea-Russia border, although Pyongyang will have been keen to diversify its sources of raw materials so that it is not beholden to one producer in the future.

"The North has limited resources and other ways to pay for oil, so the opening up of Iran again gives Pyongyang an opportunity to barter weapons for oil," said Rah.

**Weapons seizure**

This has been the case in the past, analysts say, with a North Korean aircraft seized in Thailand in December 2009 carrying an undeclared cargo of 35 tons of North Korean made rocket-propelled grenades, missile and rocket launchers, missile tubes, surface-to-air missile launchers and spare parts. The manifest claimed the cargo was oil-drilling equipment and it subsequently emerged that it was bound for Iran.

"There has been a lot of cooperation in hardware, software and nuclear technology in the past, but I would assume the Iranians will be extremely cautious this time about trying to bring in nuclear technology," Rah added.

Marcus Noland, a senior fellow at the Washington-based Peterson Institute for International Economics and a close follower of developments in North Korea, says the lifting of sanctions will make it easier for Iran to export oil, but Pyongyang appears to have muddled through in the interim.

"The sanctions on both Iran and North Korea created serious impediments to the free flow of oil into the North, but the North Koreans I have met in recent years told me there does not appear to be a shortage of oil there," he said.
Sanctions circumvented

"So while the sanctions created obstacles, those most seriously affected figured out how to circumvent them," he said. "The cost and inconvenience were marginal and now the sanctions have been lifted."

China appears to rebuilding bridges with the North "not because they have any great love for the regime, but more because they realize they have to work with Kim," Noland said.

Beijing will be put on the spot in terms of its alliance with Pyongyang, however, when the North carries out its next underground nuclear test. And Noland believes it is not a question of whether Kim will approve that next atomic test, but when.


Mehr News Agency – Tehran, Iran

Velayati: Reopening of PMD Case ‘Welshing on the JCPOA’

Wednesday, 9 December 2015

TEHRAN, Dec. 09 (MNA) – The head of Strategic Research Center of the Expediency Council has said a reopening of the PMD case will be considered as ‘welshing’ by the parties to the JCPOA.

Ali Akbar Velayati who was speaking to reporters on Tuesday after his meeting with Syrian minister of finance responded to some questions in brief encounter with the press. On Iran’s possible reaction to raising of the PMD by the western parties to the JCPOA, Velayati said that if they brought forth new claims, it would be unacceptable, and they should act according to obligations made in the JCPOA.

Velayati then turned to resistance axis where Iran, Syria, and Lebanon united and with the help of Russia, hit some success on the frontlines; “we expect to see even higher success which would strengthen the current authority of the Syrian ruling government on the country and also on its territorial integrity; in my talks with Mr. Hassan Khalil, we discussed bilateral relations in economics and politics; Iran is closely allied to Lebanon in supporting Assad and Syrian people,” he added. “Since the wake of terrorist actions against democratically elected government of Syria, this alliance has displayed excellent coordination during past 4 years; Iran and Lebanon has been head to head in scoring victories in northern and northwestern parts of the country; Iran and Lebanon enjoy strategic relations, having similar positions inn regional issues as well”.

“In Vienna Syrian talks, Iran and Lebanon supported the Syrian government and its people as an example of full coordination,” Velayati told the press.


Return to Top
Islamic Republic News Agency (IRNA) – Tehran, Iran  
9 December 2015

**IAEA Says Board of Governors Will Consider Iran Report on Dec 15**

Vienna, Dec 9, IRNA -- International Atomic Energy Agency Board of Governors will consider a report by Director-General Yukiya Amano providing final assessment on past and present outstanding issues about Iranian nuclear program, the agency said on Wednesday.

It said in a press release that IAEA Board of Governors will convene a meeting at the Agency's headquarters starting at 10:30 CET on Tuesday, 15 December 2015, in Boardroom C of the C-Building, in the Vienna International Centre.

The agency said that the Board of Governors meeting is closed to the press.

'Director General Yukiya Amano will open the meeting with an introductory statement. His statement will be released to journalists after delivery and posted on the IAEA website.'

It said that Director General Amano is also expected to hold a news conference at 14:30 CET on Tuesday, 15 December 2015, in the Press Room of the M-building.


Tasnim News Agency – Tehran, Iran

**Washington: Iran's Missile Tests No Breach of JCPOA**

December 09, 2015

TEHRAN (Tasnim) – US State Department Spokesman John Kirby said Iran's missile tests are not a "violation" of the recent nuclear deal struck between Tehran and six world powers.

"Now, that itself – ballistic missile tests – are not a violation of the JCPOA (Joint Comprehensive Plan of Action)," Kirby said on Tuesday during his daily press briefing, the official website of the US Department of State reported.

"They may, in fact, be a violation of existing Security Council resolutions and may in fact be violations of Security Council resolutions that will go into effect post implementation. So there's lots of ways for the international community to try to check this behavior, as well as the United States unilaterally, and we're going to continue to focus on that," he added.

Iran successfully test-fired a new precision-guided long-range surface-to-surface ballistic missile, dubbed Emad, on October 11.

Iran and the Group 5+1 (Russia, China, the US, Britain, France and Germany) finalized the text of the nuclear deal dubbed the JCPOA in the Austrian capital Vienna on July 14.

Trend News Agency – Baku, Azerbaijan

Iran Atomic Chief Confirms Secret Meeting held with US Counterpart

By Farhad Daneshvar, Trend
10 December 2015

Director of the Atomic Energy Organization of Iran (AEOI) Ali Akbar Salehi has confirmed that a secret meeting between him and US Energy Secretary Ernest Moniz was held in Oman last month.

“The issue that I had a meeting with US Energy Secretary Ernest Moniz is true,” Iranian Young Journalists Club (YJC) quoted Salehi as saying.

“In Oman we met and discussed removing the obstacles to implement the Joint Comprehensive Plan of Action (JCPOA),” he added.

Earlier on December 8 The Wall Street Journal claimed that the U.S. is helping Iran with an arrangement to send part of its nuclear fuel stockpile to the Central Asian nation of Kazakhstan, a step that would ease swift sanctions relief for Tehran.

The atomic chief refused to deny or confirm The Wall Street Journal’s claim regarding Kazakhstan. However he said that Iran is in discussion with “a number countries” to send out its nuclear materials waste.

According to the JCPOA the P5+1 is committed to cooperate with Iran in the safe, effective, and efficient management and disposition of nuclear and radiological wastes derived from Iran’s nuclear fuel cycle activities and nuclear medicine, radioisotope production and/or consumption activities.

According to the JCPOA, Iran is to be freed from international sanctions in return to limiting its nuclear program.

http://en.trend.az/iran/nuclearp/2468072.html

Times of India – Mumbai, India

Pakistan Test-Fires Nuclear-Capable Shaheen-III Ballistic Missile

Press Trust of India (PTI)
December 11, 2015

ISLAMABAD: Pakistan today successfully test-fired the medium-range Shaheen-III surface-to-surface ballistic missile which can carry nuclear warheads up to 2,750 km bringing many Indian cities within its range.

The test flight of the missile was aimed at validating various design and technical parameters of the weapon system, according to a statement from the Inter-Services Public Relations (ISPR).

It added that the missile is capable of delivering nuclear and conventional warheads in a range of 2,750 km.

The impact point of the missile test was in the Arabian Sea, validating all desired parameters, the statement said.
The test was witnessed by senior officers from Strategic Plans Division, Strategic Forces, Scientists and Engineers of Strategic Organisations.

Director General Strategic Plans Division, Lieutenant General Mazhar Jamil, said the country had achieved a "significant milestone" in complementing the deterrence capability.

He said Pakistan desires peaceful co-existence in the region for which nuclear deterrence would further strengthen strategic stability in South Asia.

President Mamnoon Hussain and Prime Minister Nawaz Sharif congratulated the military scientists and engineers on the successful missile test.

Pakistan had test-fired the Shaheen-I and Shaheen-II missiles last year.

Shaheen-I is also capable of carrying nuclear as well as conventional warheads and has a range of 900 kms while the Shaheen-II missile can also carry nuclear and conventional warheads up to a range of 1,500 kms.


Defense News – Tysons Corner, VA

OPINION/Commentary

Commentary: Align US Strategic Forces to New Russian Realities

By David J. Trachtenberg

December 7, 2015

Despite high expectations at the start of the Obama administration for a “reset” of the relationship with Russia, relations today are worse than at any time since the end of the Cold War. Moscow’s increasingly belligerent, anti-American and dangerously provocative international behavior has again intruded on the administration’s hopeful narrative for a better US-Russia relationship.

In addition to its illegal annexation of Crimea, invasion of eastern Ukraine and actions in the Middle East, Moscow is engaged in a massive modernization effort to bolster all elements of its nuclear forces, including building systems that violate the START and Intermediate-range Nuclear Forces treaties. Contrary to the US view that nuclear weapons have waning utility in the 21st century, Moscow sees them as valuable assets.

Russia has conducted unprecedented strategic force exercises against the West to include nuclear missile launches, bomber incursions into NATO and Japanese airspace, and simulated nuclear strikes as part of its provocative “escalate to de-escalate” strategy, which Deputy Defense Secretary Robert Work has characterized as "literally playing with fire."

Clearly, Russia’s actions are cause for alarm. Gen. Joseph Dunford, chairman of the US Joint Chiefs of Staff, has called Russia “the greatest threat” to the United States and Army Chief of Staff Gen. Mark Milley says Russia is "the number one threat" we face. In response, Defense Secretary Ash Carter has said the United States is “updating and advancing our operational plans for deterrence and defense” while military officials have called for adopting a defense posture that is both flexible and adaptable.
Despite these statements, the US continues to follow policies established early in the Obama administration. In short, despite Moscow's clear shift toward a more threatening nuclear posture, US policy remains stuck in the mud of unrealistic and outdated assumptions.

Though the administration’s 2010 Nuclear Posture Review (NPR) acknowledged the existing US nuclear arsenal is “poorly suited” to address contemporary threats, it ruled out the development of new nuclear weapons, missions or capabilities more appropriately tailored to today’s deterrence realities. This hardly reflects a flexible and adaptable defense posture.

In an environment where deterrence is increasingly uncertain and the credibility of the US extended deterrent increasingly questioned, having nuclear capabilities that are flexible, adaptable and resilient should be a top priority.

The NPR also noted that US missile defenses are focused on “newly emerging regional threats, and are not intended to affect the strategic balance with Russia.” The administration's Ballistic Missile Defense Review emphasized this as well. And a more recent unclassified Defense Department report declared that the United States “seeks to maintain strategic stability with Russia ... by demonstrating that it is not our intent to negate Russia's strategic nuclear deterrent.”

In essence, this approach leaves Americans hostage to nuclear annihilation by Russia in the interest of “strategic stability.” This is a throwback to the Cold War notion that vulnerability is stabilizing and defenses are provocative.

Defending against ballistic missile attacks from regional threats like North Korea and Iran is certainly necessary, but it is Russia that possesses the world’s largest nuclear arsenal, repeatedly threatens NATO with nuclear attack and actively practices carrying it out. Does it make sense to defend solely against the least robust threats while remaining vulnerable to the most robust? In the wake of Russia's actions, the administration may be singing a new tune, but it is dancing to the same old music.

The lack of a serious US response to Moscow’s challenges has not gone unnoticed in this election season. Sen. Marco Rubio, for example, has called for strengthening America’s nuclear deterrent and improving missile defenses. His approach is exactly on point.

All three legs of the US strategic nuclear Triad need to be upgraded. This means replacing our current Minuteman ICBMs, Ohio-class strategic submarines and aging bomber force. As a recent Center for Strategic and Budgetary Assessments report pointed out, the costs of nuclear modernization are certainly affordable and represent a small percentage of the overall defense budget; those who seek to cut these programs to save money, the report concludes, are on a “hunt for small potatoes.”

In the area of missile defense, it is time to reconsider space-based defenses, deploy an additional interceptor site in the United States, and capitalize on innovative technologies like directed energy for boost-phase defense. It is also imperative to overhaul the business-as-usual approach that has led to minimal improvements and extended test delays that reflect a lack of serious commitment.

In the most critical areas of nuclear deterrence and defense, it’s time to square the circle between Russia’s actions and America’s response. Bolstering our nuclear offensive and defensive capabilities is long overdue. Let’s get on with it.
China’s Rapidly Expanding Centrifuge Enrichment Capacity

By Hui Zhang

7 December 2015

With the aftermath of the Iran agreement hanging in the air, words such as “centrifuge,” “enrichment,” and “uranium” are still appearing regularly in news coverage. Which means that now is a good time to look at the enrichment capacity of a much larger power, thousands of miles away: China. The country’s enrichment capacity is a topic about which little has appeared in the popular press—possibly because little is publicly known, and what information there is has to be assembled, verified, and evaluated from many different independent sources.

Yet we do know that when it comes to new reactor construction and the pace of nuclear development, China leads the world. As of November 2015, China has 31 nuclear power reactors in operation, giving it the capacity to generate a total of approximately 29.3 gigawatts of electricity, or GWe. (One gigawatt is equal to one billion watts. To give a sense of scale, when water levels are high and the hydroelectric plant at the Hoover Dam is working full-tilt, the facility generates about 2 GWe, or enough to power 700,000 homes. A typical nuclear power plant has the capacity to generate electricity in the range of an average of 1 GWe.)

And China has another 21 units currently under construction, which are expected to generate another 23.4 GWe, and several new reactors totaling an additional 5 GWe are planned to be constructed within the year. All told, that means that China is on track to have close to 58 GWe in operation by 2020; another 30 GWe should be under construction by 2020, as was planned in 2012. As if that were not enough, many more reactors are under consideration for construction in the coming decades.

To supply the fuel for all these reactors, the Chinese government has been purchasing uranium on the world marketplace, establishing Chinese firms to mine uranium ore overseas, and getting the rest from its own domestic supply of ore. An approach like this will call for a massive increase in the country’s ability to enrich uranium—and China has proclaimed a policy of “self-sufficiency” in enrichment services. But how and where will China enrich the uranium needed to fuel its nuclear power plants? Especially when China’s demand for enriched uranium is expected to triple from about 3 million separative work units, or SWU (the standard unit for measuring a centrifuge’s output) in 2014 to about 9 million SWU in 2020?

Estimates based on satellite imagery, Chinese publications, and discussions with Chinese experts suggest that China is already operating civilian enrichment facilities with a capacity that may be in the range of 4.5 million SWU per year, with an estimated additional 2 million SWU per year under construction; China may well have the ability to continue at a rate that adds a million SWU of
additional capacity annually. If true, then China has a lot more enrichment capacity now than we thought, with even more on the way. China has enough enrichment capacity to meet its nuclear fuel requirements for power reactors for the coming decade and beyond. If what I project is true, then China will have excess enrichment capacity and become a net exporter of commercial enrichment services. Because of the proliferation implications of this excess enrichment, China should take steps to assure the international community that it is implementing and properly enforcing nuclear materials export controls.

A brief history: Major developments in China’s uranium enrichment capacity. To understand how China got to this position, it is important to go back to some relatively recent history.

China’s uranium enrichment industry started in the late 1950s, as a way of producing highly enriched uranium for the country’s nuclear weapons program. China had conducted research and development on centrifuge technology since 1958, and by the mid-1970s it had begun to emphasize centrifuge work. By the mid-1980s, China had constructed a uranium enrichment plant in Shaanxi province known as Plant 405; this site contained a pilot centrifuge facility that apparently was equipped with “supercritical” centrifuges—those that are designed and built in such a way that they can spin at the high speeds necessary to separate out the uranium without causing the harmful vibrations that can break the machines. It’s a technological leap akin to breaking the sound barrier; in this case, it allows one to get a centrifuge to spin at the optimal speed and separate the maximum amount of useful material without causing damage to the machine itself.

As China deepened its shift from military to civilian uses in the nuclear industry during the late 1980s, the country was eager to use less-costly centrifuge enrichment technology to replace its gaseous diffusion technology (which consumed more energy). Its first attempts did not work well, however, and China decided in the early 1990s to import a Russian centrifuge facility, under a scheme known as project 405-1A.

Under agreements in 1993, 1996, and 2008, China built Russian-supplied centrifuge facilities at its Hanzhong and Lanzhou plants in four distinct phases, for a total capacity of 1.5 million SWU. As Russian centrifuge facilities were imported, China started to use them as the starting point for designing its own, subcritical centrifuges and otherwise “buying local.” The country produced its first centrifuge in 2002 and then began industrializing the process of centrifuge production; the pace speeded up under what China’s leadership called the “active development” of nuclear power in 2004. After 2007, a government-affiliated entity, the China National Nuclear Corporation, started constructing its own, all-indigenous centrifuge facility at its Lanzhou plant, using it as a demonstration facility with a capacity of 0.5 million SWU per year; the project was commissioned in 2010. Since then, China has significantly increased its civilian enrichment capacity with the use of domestically produced centrifuge facilities at several sites, including the uranium enrichment plants at Lanzhou in Gansu province (also known as Plant 504), Hanzhong in Shaanxi province (Plant 405), and Plant 814 at Emeishan in Sichuan province—which has an additional facility at Jinkouhe.

China also operates two other enrichment facilities: one at the old Heping Gaseous Diffusion Plant and another at a smaller centrifuge plant near Emeishan. Both may be for non-weapons military uses, which could include enriching uranium for naval fuel and for tritium production. China is believed to have ended highly enriched uranium (HEU) production for weapons in 1987, when it shifted to making low-enriched uranium for civilian power reactors.
Increasing sharply civilian centrifuge capacity. As the country gained more experience with centrifuge technology, developments in that field began to accelerate. After the Lanzhou gaseous diffusion plant was closed in 2000, the plant began operating its first centrifuge facility with a capacity of 0.5 million SWU per year (referred to as the Russian-supplied Phase III).

Since 2007, the Lanzhou plant has started building three indigenous centrifuge facilities, which are now in various stages of completion: a demonstration project at Lanzhou that has a capacity of 0.5 million SWU per year and was commissioned in 2010; a commercial facility with an estimated capacity of 0.5 million SWU per year, known as Lanzhou CEP 3, and commissioned in 2012; and a larger commercial centrifuge facility known as Lanzhou Centrifuge Project 4 that will have an estimated capacity of 1.2 million SWU per year. The main processing buildings of this last project were half-finished by early 2015, and expected to be completed by the end of 2015.

At the same time, the Hanzhong plant has significantly expanded as well. Besides those previously mentioned three Russian-supplied centrifuge facilities built under Phases I, II, and IV of the China-Russian agreements, the Hanzhong plant is also operating a much larger indigenous centrifuge facility, referred to officially as the "North Expansion Centrifuge Project." Construction started on January 4, 2012; the project was completed in 2013, and it began operations in 2014. The facility has a total estimated capacity of about 1.2 million SWU yearly.

To meet increasing demand for SWU for China’s nuclear power industry, a larger commercial centrifuge facility was built near the city of Emeishan about 2011. This facility probably began operating around 2013 and has an estimated capacity of 0.8 million SWU per year. Another project at Emeishan seems to be in the early stages of construction, with an estimated capacity of about 0.8 million SWU yearly as well. This facility could be commissioned as early as 2016. And judging from satellite imagery of the site, a spare space seems to be ready for a third centrifuge facility.

Even this may not be enough to meet the “self-sufficiency” requirement set by the government for the country’s ambitious nuclear power development plans. Besides the facilities at Lanzhou, Hanzhong, and Emeishan, China also reportedly plans to build a larger uranium-processing complex with an enrichment capacity of around 7 million SWU annually. Another large uranium processing complex is also under consideration.

Taken altogether, these facilities mean that China could easily have a total estimated enrichment capacity of 12 million SWU/year by 2020, which is about one-third more than its domestic industry is expected to require. Experts at the China National Nuclear Corporation emphasize that the company is merely following the policy of “meeting its domestic demand and targeting the international markets” in supply of enrichment services. China has been pursuing a fully independent enrichment capability, which includes research and development, engineering, manufacturing, and operations.

Enrichment capacity for non-weapon military uses, or dual use. And that’s not all—let’s not forget about the previously mentioned smaller facilities that China operates, such as at the Heping gaseous diffusion plant and a small centrifuge facility near Emeishan city. Both produce enriched uranium products for non-weapon military uses or dual use.

While the Heping gaseous diffusion plant is believed to have stopped the production of highly enriched uranium for weapons in 1987 as a result of China’s “military-to-civilian conversion” policy, some Chinese publications indicate that the facility continued operations. The Heping facility was estimated to have a capacity of 0.23 million SWU per year. (It is assumed to be operating for non-weapons military or dual uses, including producing low-enriched uranium for naval reactors and highly enriched uranium for tritium production reactors and research reactors.)
And the small facility near Emeishan city mentioned above (located about 3.6 miles from the larger commercial centrifuge plant) is likely to be a centrifuge facility as well, judging from features such as a larger roof and cooling system. A satellite image taken on March 16 of 2009 shows that the facility was completed by that time, and analysis showed that it could have an enrichment capacity of 0.25 million SWU per year. Given that the site is isolated from the public transportation system and has a dedicated road and secured entrance, it is most likely a facility for dual or military uses.

In short, based on information from multiple sources—such as satellite imaging—in my new estimates, China will have excess enrichment capacity and will soon become a net exporter of commercial enrichment services. The numbers tell the story: China is expected to need enough enriched uranium to fuel a fleet of nuclear power reactors (predominantly pressurized water reactors) generating 58 gigawatts of electricity by the year 2020. That would call for a total centrifuge enrichment capacity of 9 million separative work units (SWU) by that date. But at the rate that China has been building enrichment facilities, it will be producing at least 12 million SWU from purely commercial facilities—that is, not including the military and dual-use facilities, which produce their own enriched fuel (estimated at 0.5 million SWU). In addition, when China purchases foreign reactors, it often requires the foreign vendors to supply the first supply of fuel and a few subsequent loads. Those existing deals could further save China over 10 million SWU through 2020. Consequently, China is expected to have a surplus of SWU through at least 2020, when it will be looking to sell the excess on the international market.

The development of China’s enrichment capacity has gone far beyond the government’s stated policy of “self-sufficiency” in the supply of enrichment services. In light of this surge in enrichment capacity, China should address international concerns about the proliferation implications of its development of centrifuge technology. It is not enough to say that it is “targeting international markets.” While China has issued several regulations on nuclear export controls, the government should take further measures to assure effective implementation and enforcement of these regulations and policies. And it may be time for the world to take note.

Hui Zhang is a physicist and a senior research associate at the Project on Managing the Atom in the Belfer Center for Science and International Affairs at Harvard University’s John F. Kennedy School of Government, where he leads a research initiative on China’s nuclear policies. He is co-author, with Yunsheng Bai, of China’s Access to Uranium Resources.

http://thebulletin.org/china%E2%80%99s-rapidly-expanding-centrifuge-enrichment-capacity

Lexington Institute – Arlington, VA

OPINION/Commentary

Nuclear Command & Control System: Modernization Necessary to Keep President Informed

By Constance Baroudos, M.A.

December 9, 2015

According to the U.S. National Security Strategy, the potential use of nuclear weapons poses the greatest danger to U.S. security. The U.S. strategic deterrent exists to deter a nuclear attack or
blackmail against the United States and its allies. If deterrence were to fail, the president would make the decision whether to launch nuclear weapons based on information provided by the Nuclear Command and Control System (NCCS), and would communicate his decision through the system. NCCS must be modernized to provide survivable and reliable support of that process.

The NCCS depends on a collection of activities, processes, and procedures performed by military commanders to communicate leadership decisions to nuclear forces. Military and commercial satellite sensors transmit and receive voice, video and data through the NCCS via land-based secure and non-secure phone lines, undersea cables, and airborne relay like the E-4B National Airborne Operations Center (NAOC) and E-6B Airborne Command Post planes. The system is utilized by stakeholders at the White House, Department of Defense, Department of State, Department of Homeland Security, and other federal agencies.

The Nuclear Command and Control (NC2) is a survivable network of communications and warning systems that ensures connectivity from the president to nuclear forces provided by NCCS personnel, procedures, facilities, equipment and communications. The five functions of NC2 include force management, planning, situation monitoring, decision making, and force direction. Included in NC2 is the Integrated Tactical Warning/Attack Assessment (ITW/AA) System that evaluates details using surveillance, correlation, and warning along with independent sources of information to ensure credible assessments of ballistic missile, space and air attacks on North America and its interests.

NC2 can be transferred to the E-4B NAOC and E-6B Airborne Command Post if fixed command centers are destroyed as a result of an attack. A NAOC aircraft is ready to launch within minutes from random basing locations, ensuring the survivability of the aircraft and the mission while the E-6B serves as an airborne command post and an aerial backup of the Global Operations Center (GOC) with two additional missions: launch Minuteman III intercontinental ballistic missiles, a standby to the land-based launch control facilities, and relay presidential nuclear control orders to Navy nuclear submarines and Air Force nuclear missiles and bombers.

The nuclear command, control, and communications system is the network that moves trusted data and advice to presidential advisors, the president, the National Military Command System, and nuclear weapons delivery platforms. It provides national leaders with situational awareness, advanced warning and command and control capabilities to ensure authorities have the maximum amount of time to make decisions, strengthening the Air Force’s ability to respond and employ forces against a target.

While the information and communication lines within NCCS are critical to the safety of the U.S. and its interests, the system needs to be modernized to ensure survivability and operate with current technology. To avoid the interruption or destruction of sensitive electronics of the system, NCCS facilities need to be built to resist the effects of a nuclear explosion and an electromagnetic pulse attack. Modern systems must also be able to operate on internet-like networks to provide survivable and reliable support, and must be protected against cyber attacks and network intrusions.

The Air Force in particular needs more money to modernize nuclear networks since they have been in place since the Cold War. Admiral Cecil D. Haney has confirmed mission success is increasingly at risk due to age and the growing complexity of the security environment. Upgrading the system will likely translate into lower costs for maintenance since new technology is less extensive to sustain. The Air Force is working towards upgrading the system to support the current intercontinental ballistic missile program as well as the future Ground-based Strategic Deterrent likely to be deployed circa 2030.
The Nuclear Command and Control System provides critical information and communication pathways to U.S. government officials, the president, and the U.S. strategic deterrent. The leader of the Free World is dependent on intelligence from NCCS to decide whether launching a nuclear weapon is the best course of action and the president will communicate his decision through the system. Since NCCS ensures crisis stability, deters attack against the U.S. and allies and maintains the safety, security, and effectiveness of the U.S. nuclear deterrent, it must be upgraded to operate with modern technology, protected against cyber attacks and network intrusions, and survive if a nuclear or electromagnetic pulse attack were to occur.

Constance Baroudos is a Policy Analyst and Program Director at the Lexington Institute. Her current research interests include ballistic missile-defense and nuclear strategy.

http://lexingtoninstitute.org/nuclear-command-control-system-modernization-necessary-to-keep-president-informed/

Bulletin of the Atomic Scientists – Chicago, IL

OPINION/Analysis

Do More Nukes really Mean More Nuclear Crises? Not Necessarily

By Matthew R. Costlow

9 December 2015

Thirty-two years ago, during what military historians call the “1983 war scare,” the United States and the Soviet Union arguably came closer to nuclear war than at any time since the Cuban Missile Crisis in 1962. A newly-declassified 1990 report by the President's Foreign Intelligence Advisory Board, published in October by the National Security Archive, makes this case. It concludes that some Soviet leaders thought an annual NATO exercise called Able Archer was possibly a front for a preemptive nuclear strike by the United States, and placed some strategic forces on alert in response.

The release of the report will add to discussion over what factors cause nuclear crises. Disarmament advocates traditionally argue that the more nuclear weapons the United States retains, the greater the risk of a nuclear crisis. Ploughshares Fund President Joseph Cirincione, for example, writes that “the US and Russian stockpiles are on track to decline for at least the rest of this decade. As their numbers come down, so does the risk of nuclear war.” Nuclear analysts Hans M. Kristensen, Robert S. Norris, and Ivan Oelrich argue more broadly that “excess [nuclear] weapons increase the nuclear danger without contributing to national or the world’s security.”

But is the conventional wisdom correct? If the United States reduces its nuclear arsenal further, will it actually reduce the chances of a nuclear crisis? The historical data seem to answer in the negative.

In this context, a nuclear crisis occurs when one or more nations place some portion of their strategic forces on a higher state of alert in response to growing tensions. The US and Soviet experience during the Cold War provides analysts with the most information on the question of correlation between nuclear warhead numbers and nuclear crises. If more of the former increased the risk of the latter, then one would expect to see more crises during the decades when the United States and Soviet Union had the largest nuclear arsenals.
What the numbers show. According to open reports, during the 1940s, the United States put its nuclear forces on alert twice—first in response to Yugoslavia shooting down US C-47s (1946), and second in response to the Berlin blockade (1948). During the 1950s, the United States put its nuclear forces on alert four times: during the Korean War (1950-1953), the Suez Crisis (1956), the Lebanese Crisis (1958), and the Taiwan Strait Crisis (1958). The Soviets, who acquired their first nuclear weapon in 1949, did not place their nuclear forces on alert in the 1950s. In the 1960s, the United States put its nuclear forces on alert four times: when the Soviets downed a US U-2 spy plane just before the 1960 Paris peace summit, during the Berlin Crisis (1961), during the Cuban Missile Crisis (1962), and amid Vietnam War negotiations in 1969. The Soviet Union placed its nuclear forces on alert in 1960, 1961, and 1962, as well as in 1968, when it and four other Warsaw Pact countries invaded Czechoslovakia. During the 1970s, the United States and the Soviet Union each placed their nuclear forces on alert once, during the Arab-Israeli War in 1973. Lastly, during the 1980s, the Soviets placed their nuclear forces on alert during the Able Archer Exercise in 1983.

The US nuclear arsenal size from 1945 to 1949, during which it put its nuclear forces on alert twice, averaged about 49 weapons. The average size of the US nuclear arsenal during the 1950s was about 3,500 weapons, and it experienced four crises in which nuclear forces were put on alert. In the 1960s, with the average size of the US nuclear arsenal at about 27,000 weapons, the United States again experienced four crises in which it put nuclear forces on alert. The average size of the US nuclear arsenal during the 1970s was about 26,000 weapons, and it experienced one crisis in which it put nuclear forces on alert. Finally, the average size of the US nuclear arsenal during the 1980s was about 23,000, and it experienced no crises in which it put nuclear forces on alert.

Thus it is clear that the United States, during the Cold War, sometimes experienced multiple crises at times when its arsenal was relatively small, yet also went through a decade with a relatively high average arsenal size during which it experienced only a single nuclear crisis. So even while the arsenal size fluctuated, there seemed to be no parallel rise or fall in the number of times the United States experienced a nuclear crisis.

As for the Soviet Union, it put its nuclear forces on alert four times during the 1960s, when its arsenal was relatively small (ranging in size from 1,627 warheads in 1960 to 10,671 in 1969). In contrast, it placed its nuclear forces on alert only once in the 1970s and once in the 1980s even with a steadily-growing and much larger arsenal. (The Soviet nuclear arsenal peaked at 40,159 nuclear warheads in 1986.)

These data sets—covering five decades, many thousands of weapons, and multiple buildups and draw-downs—are too big for the numbers to be dismissed as statistically insignificant. They simply don’t support the notion that achieving a world with many fewer nuclear weapons—the goal of arms control negotiations—necessarily means we will experience fewer nuclear crises.

Smaller arsenal, higher tensions. Some may hold out hope that arms control efforts will themselves bring about better and more stable relations between nations like the United States and Russia, thus reducing the risk of a crisis. Yet the history of arms control offers very little hope in this regard. The United States and Soviet Union signed the first Strategic Arms Limitation Treaty and the Anti-Ballistic Missile Treaty in 1972, and the following year, both nations put their nuclear forces on alert during the Arab-Israeli War.

Only five years ago, the United States and Russia signed New START in the midst of a supposed “reset” in US-Russian relations. Now, following US reductions to its nuclear arsenal, the chairman and vice chairman of the Joint Chiefs of Staff agree that Russia is the number one threat to the United States. Arms control negotiations, by themselves, do not automatically lead to improved relations.
While the world has been blessed to see a drop-off in nuclear crises since the end of the Cold War, nuclear saber-rattling continues. Russian President Vladimir Putin has made numerous nuclear threats against US allies in NATO, while North Korean officials have vowed that if provoked, Pyongyang will fight the United States until there is “no one left to sign a surrender document.” However, though nuclear crises are still a frighteningly real possibility, it does not appear that further US nuclear force reductions will necessarily lower the risk of them occurring.

The fact is, crises are often caused by many more factors than just the balance of forces, nuclear or otherwise, between two nations. Analysts must follow where the facts lead them, and right now, it appears the evidence doesn’t suggest that further cuts to US nuclear weapons are a solution to future nuclear crises.

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http://thebulletin.org/do-more-nukes-really-mean-more-nuclear-crises-not-necessarily

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OPINION/Editorial

China-NK Ties Adapt to New Condition

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A number of North Korea-related events have come under the spotlight of the international media lately. The country's State Merited Chorus and Moranbong Band embarked on their China tour Thursday, and will give performances in Beijing’s National Centre for the Performing Arts. It is widely considered a signal of furthering warming relations between China and North Korea.

Also on Thursday, the US was expected to urge the UN Security Council to refer the North Korean human rights situation to the International Criminal Court. Both China and Russia will probably not support the Security Council in doing so, and there is a great possibility that it will be vetoed.

Furthermore, the Korean Central News Agency reported the same day that during North Korean leader Kim Jong-un’s recent inspection tour, he said his country has become a powerful nuclear weapons state, and is "ready to detonate a self-reliant A-bomb and H-bomb to reliably defend its sovereignty and the dignity of the nation."

The outside world mostly believes that the country’s nuclear capability is quite limited, and its claims are exaggerated. With the fourth anniversary of former leader Kim Jong-il’s death coming, Kim Jong-un may have made the remarks in order to boost the nation’s morale.

As long as the North does not engage in any more nuclear testing, there is room for improvement in Beijing-Pyongyang ties. Otherwise, a new round of international sanctions will emerge, which will inevitably create a negative influence on Sino-North Korean relations.
The relationship between the two is moving forward with traditional friendship as a driving force, yet also with the shadow of the North Korea nuclear issue overhead, which is an unusual test. A friendly relationship is of important significance for both sides, and has a positive effect on easing the nuclear issue.

Pyongyang is under huge strategic pressure from Seoul and Washington. The challenges it is confronting will not be solved by simply owning nuclear weapons. Friendly ties with China have provided a crucial external support for the nation's long-term stability. It is impossible for a clean break to happen between the two, and this is becoming increasingly clear.

Public opinion in South Korea and the West often predicts that the Beijing-Pyongyang relationship will take a bad turn given their divergences. However, the bilateral bond is not forged by minor details, but has strong strategies within. History and geopolitics are driving them together, instead of pulling them apart.

As the troupes departed Pyongyang, Kim Ki-nam, secretary of the Workers’ Party, and Li Jinjun, Chinese ambassador to North Korea, waved them off at the train station. This is not just a normal cultural exchange, but a special way of expressing goodwill to each other.

Both Chinese and North Korean societies should take this opportunity to relive their traditional friendship, and ponder the complexity of resolving the North Korea nuclear issue. How the issue will end up is hard to predict, but it should be peaceful. It's wrong to presume it can be solved by pressure from China alone.

http://www.globaltimes.cn/content/957814.shtml

Return to Top
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.