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India

Nirmala Sitharaman's 4th tranche of measures: Govt opens up coal sector, hikes FDI limit in defence manufacturing

The Indian Express, May 16, 2020

The finance minister said that the government will establish a research reactor in the PPP model for the production of medical isotopes to promote the welfare of humanity through affordable treatment for cancer and other diseases.

She also said that they will be establishing facilities under PPP mode to use irradiation technology for food preservation. This will complement agricultural reforms and assist farmers. The government will link India's robust startup ecosystem to the nuclear sector to foster synergy between research facilities and tech entrepreneurs.

https://indianexpress.com/article/business/economy/finance-minister-nirmala-sitharaman-fourth-tranche-economic-package-announcements-6412870/

Russian specialists to adjust vibrations in Kudankulam N power unit

Energy World, May 22, 2020

A team of six Russian specialists from turbine manufacturer Power Machines have come to Kudankulam Nuclear Power Project (KNPP) to complete the vibration adjustment of the new generator stator in the second unit. India's atomic power plant operator Nuclear Power Corporation of India Ltd (NPCIL) has two 1,000 MW power units supplied by Rosatom. The second unit was stopped on Thursday afternoon so that the high vibration in the generator is set right.

In order to avoid simultaneous shutdown of both the power generating units, the managements of Indian and Russian companies decided for a short-term shutdown of Unit 2 during May. In pursuant of that decision and in connection with the partial relaxation of the Covid-19 restrictive measures, a chartered flight with specialists of turbine manufacturer Power Machines was dispatched from Russia in a timely manner, the official said.

https://energy.economictimes.indiatimes.com/news/power/russian-specialists-to-adjust-vibrations-in-kudankulam-n-power-unit/75894618

Assembly of ITER fusion machine gets under way

World Nuclear News, May 29, 2020

The operation marked the culmination of a ten-year effort to design, manufacture, deliver, assemble and weld one of the most crucial components of the ITER machine - the 30-metre-high, 30-metre-in-diameter ITER cryostat (of which the base is only one part). Procured by India, manufactured in

segments by Larsen & Toubro Ltd at its Hazira factory, the cryostat is being assembled and welded on site under the supervision of the Indian Domestic Agency. The elements for the base section were delivered to ITER in December 2015 and the component was finalised in July 2019. Taking over from the Indian Domestic Agency, the Iter Organisation then proceeded with "pre-assembly work" before moving the component into the Assembly Hall one month ago.

"The coming moments will stand out in the minds and memories of us all. What you will accomplish today, as a team, is something that has never been done before in history - and although you have rehearsed it many times, it will be a first-of-a-kind operation," said Iter Director-General Bernard Bigot at the start of the operation to install the component. "We trust the engineering calculations, strategy and control. We trust the materials science. We trust the metrology. But my confidence today is because I trust you to work as one committed and highly professional team, convinced as we all are that failure is not an option."

https://www.world-nuclear-news.org/Articles/Assembly-of-ITER-fusion-machine-gets-under-way

China

China's satellite navigation industry turned up $49 billion in 2019
Global Times, May 18, 2020

China's satellite navigation and location services industry achieved an output value of 345 billion yuan ($48.58 billion) in 2019, up 14.4 percent from the previous year, according to an annual industry report. The data was published in the White Paper on the Development of China's Satellite Navigation and Location Services Industry (2020), which was released by the GNSS (global navigation satellite system) and LBS (location-based service) Association of China on Monday.

The industry's growth rate in 2019 was 3.9 percentage points lower than that of 2018, due to slower demand in the domestic market and tougher competition overseas, said Zhang Quande, secretary-general of the GNSS and LBS Association of China (GLAC). The industry's core sectors are directly related to the development and application of the satellite navigation technology, and include chip, device, algorithm, software, navigation data, terminal equipment and infrastructure sectors. These sectors reported 116.6 billion yuan in output value, accounting for 33.8 percent of the industry's total. The BeiDou Navigation Satellite System (BDS) contributed 80 percent of the output value generated by the core sectors.

http://www.globaltimes.cn/content/1188659.shtml

China to probe Mars in July: CASC
Deng Xiaoci
Global Times, May 24, 2020

China is eyeing a July launch for its first-ever Mars probe mission, via its strongest launch vehicle the Long March-5B, according to state-owned rocket giant space contractor China Aerospace Science and Technology Corporation (CASC) on Sunday. According to a press release the CASC sent provided to the Global Times, the Mars probe project was approved by national authorities in 2016, and was scheduled to be delivered by the end of the 13th Five-Year Plan (2016-2020.) The project is being carried out on schedule.

http://www.globaltimes.cn/content/1189292.shtml

Architect of China's new-generation spaceship reveals process of design
Global Times, May 23, 2020

The successful return of the trial version of China's new-generation manned spaceship capsule to the Dongfeng landing site in North China's Inner Mongolia Autonomous Region on May 8 marked another milestone of the China's space station program and a step closer to sending astronauts to the moon. Zhang Bainan, chief designer of the trial version of China's new-generation manned spaceship, witnessed the success with his team members at the Beijing Aerospace Control Center. Zhang was born in June 1962 in Qiqihar of Northeast China's Heilongjiang Province. He has consistently read Aerospace Knowledge, a science popularization magazine, since his junior high school years.

http://www.globaltimes.cn/content/1189223.shtml

China eyes biology experiments in space station
Deng Xiaoci
Global Times, May 23, 2020

China's new space station, expected to be operational in 2022, will likely be used as a facility for large-scale biological experiments which will help the country safeguard its biosecurity, according to Zhao Xiaojin, Party chief of the China Academy of Space Technology (CAST). The trial version of the country's new-generation manned spaceship, which was developed by CAST, successfully completed its maiden flight and returned safely earlier this month, fully verifying the function of the key technology, Zhao noted. "The era of China's space station construction has officially been ushered in," he said. Construction of the space station is set to be completed in 2022. It will operate in low-Earth orbit at an altitude of 340-450 kilometers for more than 10 years, supporting large-scale scientific, technological and application experiments. China is also expected to conduct its first Mars probe mission, codenamed Wentian-1, later this year, and the Chang'e-5 lunar probe, a moon sampling return mission, is also scheduled for this year.

According to China's space authorities, the country's third-generation spacecraft tracking ship the Yuanwang-6 has set sail for the Pacific where it will conduct monitoring and control missions. The ship's captain Yang Bianjiao said that the journey is intended to test the vessel's updated equipment and strengthened spacecraft tracking capabilities, which will lay the foundation for follow-up missions, including the Mars probe and the Chang'e-5 lunar probe. Tianwen-1, China's first Mars probe mission, aims to orbit, land and rove in one go, according to the China National Space Administration. No country has completed such an undertaking in its exploration of the Red Planet, meaning the Chinese mission faces unprecedented challenges, Zhao said. China also plans to send out two more advanced Earth observation satellites from the Gaofen satellite family in 2020, and will conduct a Mars sample return mission by around 2030, as well as a Jovian System
probe mission, Zhao said.

http://www.globaltimes.cn/content/1189219.shtml

Nuclear tech has wider anti-virus application: political adviser
Cao Siqi
Global Times, May 26, 2020

Nuclear-related irradiation sterilization, which offers high security, conserves energy and is environmentally friendly, has been given full play in the past months during battle against COVID-19, a political adviser said, suggesting this technology be promoted in the medical field and emergency response system. If nuclear power is known as "heavy industry" in the nuclear field, other applications such as irradiation technology are referred to as "light industry," which has had a low profile.Irradiation sterilization means using cobalt Y rays or high-energy electron beams produced by an accelerator to sterilize objects. As Y rays and electron beams have penetrating power, they can change the microbial structure of items and then achieve sterilization.

Luo, an academician of the Chinese Academy of Engineering and Party secretary of the China Academy of Atomic Energy under the China National Nuclear Corp, said sterilization and disinfection of medical supplies such as protective suits is key to winning the battle against the epidemic. Using the traditional sterilization method, it takes seven to 14 days to finish disinfection. However, irradiation sterilization can shorten the time to one day, greatly improving the sterilization effect and efficiency. In addition, no waste gas or liquid will be generated by this means, which is energy-saving and environmentally friendly. "It is very safe," he said. In response to the COVID-19 outbreak, the corporation is also developing a new technology to prepare radioactive drugs that can eliminate the novel coronavirus, Luo said. This effort "has achieved phased progress." Although the application of nuclear technology in China has reached a certain scale, it still accounts for a relatively low proportion of the economy, which is still far behind developed countries. According to Luo, during this pandemic, more than 40 percent of medical supplies were sterilized with irradiation abroad, compared with 10 percent in China.

http://www.globaltimes.cn/content/1189586.shtml

Fuqing-5 nuclear reactor will go into operation this year: CNNC
Global Times, May 26, 2020

The Fuqing-5 nuclear reactor will be put into operation by the end of 2020, according to the China National Nuclear Corporation (CNNC). Located in Fuqing, South China's Fujian Province, the reactor is China's first nuclear power project to use China's own "Hualong One" nuclear reactor. It has a domestically developed third-generation reactor design, with exclusive intellectual property Rights.

A key tightness function test was completed on May 13, marking an important step in the development of the reactor before the fuel loading process, according to media reports.
The "Hualong One" design was developed by two major state-backed nuclear power giants, CNNC and the China General Nuclear Power Corporation, to meet higher requirements of the latest global nuclear safety standards. The reactor will enter the fuel loading process in mid-year after verification by the National Nuclear Safety Administration, the country's nuclear safety watchdog, and should be able to be put into operation by the end of this year, Gu Jun, general manager of CNNC and a deputy of the National People's Congress, said on Sunday. As of April 2020, China has 47 nuclear power reactors in operation, ranking second in the world, and currently, 15 nuclear power stations are under construction, the most in the world.

http://www.globaltimes.cn/content/1189540.shtml

Chinese-French consortium successfully lifts 1,250-ton base for mega fusion reactor amid pandemic
Global Times, May 29, 2020

A Chinese-French consortium headed by the China National Nuclear Corporation (CNNC) successfully lifted a 1,250-ton base for the International Thermonuclear Experimental Reactor (ITER) in the South of France, a staged achievement for China's nuclear sector amid the COVID-19 pandemic. The cryostat base, the first major component installed for the mainstay of the ITER tokamak device - the fusion reactor core - lays a foundation for all important equipment of the tokamak machine, one of the world's most ambitious energy projects. Therefore, the accuracy and progress of the base's installation is considered a "golden point" for ITER, CNNC said in a posting on its official WeChat account.

A controlled fusion device, commonly known as an artificial sun, is intended to secure the world's energy future. The ITER facility, a global big science project second only to the International Space Station in size, is being jointly constructed by China, the EU, India, Japan, South Korea, Russia and the US. Its success is significant to future peaceful utilization of international fusion. Thursday's achievement set a new record for hoisting major equipment in China's nuclear sector, measured by lifted weight and accuracy of installation, per CNNC's WeChat post. The consortium managed to overcome multiple adverse impacts during the pandemic, including those related to staff dispatch and work equipment procurement, to make its breakthrough. The CNNC- headed consortium signed a contract with ITER in September 2019 for the installation of the most important part of the tokamak.

http://www.globaltimes.cn/content/1189928.shtml

Report of Chinese scramjet test a challenge to most-advanced missile defence systems
Stephen Chen
South China Morning Post, 31 May, 2020

Engine built for China's classified hypersonic strike weapon hits 600 seconds in ground test
A 10-minute scramjet boost to a weapon could give it a range of over 4,000km at top speed. A scramjet engine built for China's hypersonic strike weapon can run at maximum boost for at least 10 minutes, the longest in the world. In a ground test in Beijing, Dr Fan Xuejun and colleagues from the Institute of Mechanics fed extremely fast, super-hot air into the engine and took the burn to the maximum for 600 seconds, according to an article posted on the institute's website last month. Since 2013, the United States Air Force X-51A Waverider has held the duration record with a 210-second burn that pushed the plane to Mach 5. In 2016, an Indian test vehicle reached Mach 6 with the engine running for just five seconds. The Chinese breakthrough was based on the "world's first systematic investigation into the effect of hydrocarbon fuel state change on the performance and stability of supersonic
combustion", the article said.

The Institute of Mechanics was founded by Dr Hsue-Shen Tsien, the founding father of China's rocket programme and developer of some of the world's earliest hypersonic flight models in the 1940s. The Chinese Academy of Sciences has nominated Fan – a Princeton physics PhD who has worked on the scramjet programme since 2004 – for a national "innovator of the year" prize. A scramjet is an air-breathing engine for flight that becomes operational at Mach 5 – five times the speed of sound – or above. Traditional jet engines can melt at hypervelocity. The scramjet has no moving parts, like a turbofan, but instead uses the forward motion of a plane to compress air and mix it with high-energy fuel to generate explosive thrust.

https://www.scmp.com/news/china/science/article/3086804/report-chinese-scramjet-test-challenge-most-advanced-missile

Pakistan

Disgraced Pakistani Nuclear Scientist Abdul Qadeer Khan Pleads For Assistance

Eurasian Times, May 22, 2020

Pakistan's Nuclear father, Abdul Qadeer Khan has told the top court in a handwritten note that he is being "kept prisoner" by government agencies and is not allowed to plead his case for freedom of movement. In the handwritten note that the 83-year-old man submitted to the Supreme Court of Pakistan on Thursday, Abdul Qadeer Khan said – "I had been kept as a prisoner having no free movement or meeting with anybody." Khan mentions he had does not have access to any friend, so much so that his daughter and her children living a few houses away could not meet him, adding that the restrictions were so unlawful that he could not even access the court.

"This act of security authorities is illegal since no such order has been conveyed to me warranting the treatment being meted out to me now", writes Abdul Qadeer Khan. In 2004, Abdul Qadeer Khan had confessed to selling nuclear secrets on TV. It was alleged that he supplied designs, hardware and materials to make enriched uranium for atomic bombs to other countries like Iran, Libya and North Korea. A metallurgist by training, Khan was then accused of espionage by the nuclear fuel company that he had earlier worker for. The NBC News called him an "unapologetic patriot" and wrote that "it had taken a degree of patriotism that only one adjective could adequately describe: fanatical."

https://eurasiantimes.com/disgraced-pakistani-nuclear-scientist-abdul-qadeer-khan-pleads-for-assistance/

Pakistan will remain a responsible nuclear state, Qureshi says

Pakistan Today, May 29, 2020

Foreign Minister Shah Mahmood Qureshi has said that Pakistan is a peace-loving country and its conduct as a nuclear state will continue to be defined by restraint and responsibility. Addressing a webinar organised to mark Yaum-e-Takbeer here on Thursday, the foreign minister said, "We are opposed to a nuclear or conventional arms race in the region."

He said that Pakistan has demonstrated its commitment to peace and stability by putting forward the proposal for a strategic restraint regime. "Our desire for peace should not leave anyone in doubt regarding our capability and we will defend ourselves effectively against any form of aggression," he said. He said, "Today we are commemorating Yaum-e-Takbeer in the backdrop of the Covid-19 pandemic which threatens the international community without regard to geographic boundaries, and ethnic, political and religious divides."

https://www.pakistantoday.com.pk/2020/05/28/pakistan-will-continue-to-remain-responsible-nuclear-state-qureshi-says/

India playing with risky military concepts: Qureshi

The News International, May 30, 2020

Foreign Minister Shah Mehmood Qureshi said that India is showing risky behaviour for playing with dangerous military concepts, but assured the world that it (Pakistan) would continue to act with restraint and responsibility. The security situation resulting from "hegemonic ambitions of a larger neighbor under the rule of an ultra-nationalist and revisionist regime", he said, does not allow Pakistan to lower its guard. He emphasised Islamabad's desire for peace saying Yaum-i-Takbeer observance reminds us about Pakistani quest for peace and its resolve to defend its territorial integrity, sovereignty and independence.

Mr Qureshi said that 'credible minimum deterrence' would remain the guiding principle of Pakistan's nuclear posture and reiterated Islamabad's pledge to stay away from regional arms race. "Pakistan has demonstrated its commitment to peace and stability by putting forward the proposal for a Strategic Restraint Regime (SRR). Yet our desire for peace should not leave anyone in doubt regarding our capability and will to defend ourselves effectively against any form of aggression," he maintained. The foreign minister recalled Pakistan's growing technological prowess and offered cooperation with other countries in civilian nuclear application. He said Pakistan wanted to expand its high technology exports.

https://www.thenews.com.pk/print/665365-india-playing-with-risky-military-concepts-qureshi

USA

US uranium output falls 89% in 2019

World Nuclear News, May 19, 2020

The 2019 Domestic Uranium Production Report recorded US uranium production in 2019 from six facilities: five in-situ leach (ISL) plants in Nebraska and Wyoming (Crow Butte Operation, Lost Creek Project, Ross CPP, North Butte, and Smith Ranch-Highland Operation) and one underground mine. At the end of the year, two conventional uranium mills - Shootaring Canyon Uranium Mill in Utah and Sweetwater Uranium Project in Wyoming - were on standby, and the White Mesa Mill in Utah was no longer producing uranium. The report does not provide details of the amount of ore fed to mills from underground mines, but notes that this may include ore mined and shipped to a mill during the same year, previously mined ore from stockpiles at mine sites, ore from stockpiles maintained at a mill site, or a combination of these. At the year's end, three ISL plants - Lost Creek, Nichols Ranch ISR Project, and Smith Ranch-Highland, all in Wyoming - were operating with a combined capacity of 9.5 million pounds U_3O_8 per year, the EIA said. Six ISL plants were on standby.

Total employment in the US uranium production industry was 265 full-time person-years (one person year is equal to full-time employment for one person), a 29% year-on-year decrease. Employment in mining activities, at 48 person-years, was 56% down on the 110 person-years recorded for 2018, but exploration employment, at 40 person-years, showed a 48% increase. Reported estimated US uranium reserves at the end of 2019 were 31 million pounds U_3O_8 at a maximum forward cost of up to USD30 per pound; 206 million pounds U_3O_8 at up to USD50 per pound and 389 million pounds U_3O_8 up to USD100 per pound.

https://www.world-nuclear-news.org/Articles/USA-releases-2019-uranium-figures

Trump Will Withdraw From Open Skies Arms Control Treaty

David E. Sanger

The New York Times, May 21, 2020

President Trump has decided to withdraw from another major arms control accord, he and other officials said Thursday, and will inform Russia that the United States is pulling out of the Open Skies Treaty, negotiated three decades ago to allow nations to fly over each other's territory with elaborate sensor equipment to assure that they are not preparing for military action.

Mr. Trump's decision may be viewed as more evidence that he is preparing to exit the one major arms treaty remaining with Russia: New START, which limits the United States and Russia to 1,550 deployed nuclear missiles each. It expires in February, weeks after the next presidential inauguration, and Mr. Trump has insisted that China must join what is now a U.S.-Russia limit on nuclear arsenals. Even as the administration disclosed Mr. Trump's intention to withdraw from the Open Skies agreement, the president held out the possibility of negotiations with the Russians that could save American participation in the accord.

https://www.nytimes.com/2020/05/21/us/politics/trump-open-skies-treaty-arms-control.html

US senators urge extension to uranium import quota

World Nuclear News, May 21, 2020

The letter to Department of Commerce Assistant Secretary Jeffrey Kessler was signed by Senator John Barrasso, who is chairman of the Senate Committee on Environment and Public Works, and Senators Martin Heinrich, Lisa Murkowski, Joe Manchin, Mike Braun, Tom Udall, Kevin Cramer, Mike Enzi, Tom Cotton and Lindsey Graham. In it, the senators called for DOC to reduce imports of Russian uranium to below existing limits. This, they said, will protect the USA's natural uranium fuel supply chain from "aggressive and illegal trade practices of nuclear state-owned enterprises of foreign adversaries". The NFWG was established by President Donald Trump in July 2019 to undertake a fuller analysis of national security considerations with respect to the entire nuclear fuel supply chain, following on from a presidential decision in response to a Section 232 Petition from two US uranium miners, Energy Fuels Inc and Ur-Energy, which called for a quota on uranium imports. The working group's report, Restoring America's Competitive Nuclear Energy Advantage: A strategy to assure US National Security, setting out recommendations to support US strategic fuel cycle capabilities and revitalise the sector, was published last month.

One of the measures recommended by the NFWG was to extend the RSA, which sets quotas on imports of Russian uranium into the USA to ensure that the US front-end nuclear fuel cycle is not materially injured by imports of uranium at less than fair market value. The current RSA, which has been amended several times since the original 1992 agreement, expires this year and is under review by DOC. It currently sets a maximum cap for imports of Russian uranium to 20% of the US market.

https://www.world-nuclear-news.org/Articles/US-senators-call-for-extension-of-uranium-import-q

Energy Fuels looks to rare earths to enhance White Mesa operations

World Nuclear News, May 22, 2020

The company has entered into consulting agreements with two REE industry experts, Constantine Karayannopoulos and Brock O'Kelley, to help it in the development and implementation of commercial and technical REE strategies. "Over the past year or so, Energy Fuels has been actively evaluating this rare earth opportunity," Energy Fuels President and CEO Mark Chalmers said. "We are quickly coming to the conclusion that the White Mesa Mill may be an ideal US facility to process rare earth element ore streams and produce rare earth concentrates.

The company said yesterday that it is evaluating "minor modifications" to its operations, complementary to its uranium business, to enable the processing of uranium and thorium-bearing rare earth ores at the fully licensed and operational mill in Utah". Such ores are expected to come from third parties, either through ore purchase, tolling, or other arrangements. The company expects to produce a commercially viable rare earth concentrate or concentrates, while also recycling and recovering uranium from the ores. The rare earth concentrates could then be available for commercial sale to third party REE oxide separation and recovery facilities, or could potentially undergo further refinement and REE separation and recovery at White Mesa. "Removal and recovery of the uranium and thorium from rare earth ores is the key aspect of Energy Fuels' value proposition, as many rare earth separation and recovery facilities are not able to handle uranium or thorium from a technical or regulatory standpoint," the company said.

https://www.world-nuclear-news.org/Articles/Energy-Fuels-looks-to-rare-earths-to-enhance-White

Trump administration discussed conducting first U.S. nuclear test in decades

John Hudson and Paul Sonne

Washington Post, May 23, 2020

The Trump administration has discussed whether to conduct the first U.S. nuclear test explosion since 1992 in a move that would have far-reaching consequences for relations with other nuclear powers and reverse a decades-long moratorium on such actions, said a senior administration official and two former officials familiar with the deliberations. The matter came up at a meeting of senior officials representing the top national security agencies May 15, following accusations from administration officials that Russia and China are conducting low-yield nuclear tests — an assertion that has not been substantiated by publicly available evidence and that both countries have denied.

A senior administration official, who like others spoke on the condition of anonymity to describe the sensitive nuclear discussions, said that demonstrating to Moscow and Beijing that the United States could “rapid test” could prove useful from a negotiating standpoint as Washington seeks a trilateral deal to regulate the arsenals of the biggest nuclear powers.

https://www.washingtonpost.com/national-security/trump-administration-discussed-conducting-first-us-nuclear-test-in-decades/2020/05/22/a805c904-9c5b-11ea-b60c-3be060a4f8e1_story.html

Final module installed at Vogtle 3

World Nuclear News, May 26, 2020

The component, which is 35 feet (10.6 metres) in height and weighs over 720,000 pounds (326 tonnes), was lifted into place on top of the containment vessel and shield building roof at the nuclear expansion project near Waynesboro, Georgia. It will hold water to help cool the reactor in an emergency. The water can also be directed into the reactor's used fuel pool, while the tank itself can be refilled from water stored elsewhere on site. The tank is part of the plant's passive safety systems which require no operator actions to mitigate potential emergency situations, using natural forces such as gravity, natural circulation and compressed gas to achieve their safety function.

Two AP1000 units are being built at Vogtle, and the use of modules such as the CB-20 has helped streamline the construction process, Georgia Power said. Modules have been made in advance, then shipped by rail and truck to the project site where they have been assembled into larger components ready for installation. The last of the 1485 major modules required to complete construction arrived at the site in late 2019. Placement of the CB-20 module follows the placement earlier this month of Vogtle 3's integrated head package. Construction of Vogtle unit 3 began in March 2013 and unit 4 in November the same year. Vogtle 3 is scheduled to enter service by November 2021 and unit 4 by November 2022.

https://www.world-nuclear-news.org/Articles/Final-module-installed-at-Vogtle-3

U.S. to end sanctions waivers allowing some work at Iran nuclear sites

Arshad Mohammed and Humeyra Pamuk

Reuters, May 27, 2020

The United States said on Wednesday it will terminate sanctions waivers that had allowed Russian, Chinese and European companies to carry out work originally designed to make it harder for Iranian nuclear sites to be used for weapons development. The waivers, which officials said expire on July 27, covered the conversion of Iran’s Arak heavy water research reactor, the provision of enriched uranium for its Tehran Research Reactor and the transfer of spent and scrap reactor fuel abroad.

In a statement, U.S. Secretary of State Mike Pompeo gave no precise justification for the move, which will halt some work originally designed to make it more difficult for Iran to potentially develop fissile material for nuclear bombs. However, Pompeo said Washington would extend for 90 days a waiver allowing foreign work at a Russian-built nuclear power plant at Bushehr to ensure safety.

https://www.reuters.com/article/us-usa-iran-nuclear/u-s-to-end-sanctions-waivers-allowing-some-work-at-iran-nuclear-sites-idUSKBN2332W1

MPC lid welding passes US regulatory inspection

World Nuclear News, may 27, 2020

Holtec's MPC is a single versatile package equally suitable for on-site storage, transport, and permanent disposal in a future repository. It consists of a cylindrical shell, baseplate, lid, port covers and closure ring that form the confinement boundary for the stored fuel assemblies. The confinement boundary is a seal-welded enclosure of all stainless steel construction. Holtec noted the ongoing COVID-19 pandemic "presented new and evolving challenges" for the welding dry run, which was conducted at Holtec's technology campus in Camden, New Jersey. The Holtec and Exelon team practised social distancing and reinforced health and safety practices throughout the inspection. Using thorough pre-job briefs, the welding dry run was successfully completed without any open items to the NRC.

Following the initial welding dry run, a second dry run for drying and backfill operations for Peach Bottom only was successfully completed at the Peach Bottom plant in Pennsylvania, again without any issues identified by the NRC. A joint second dry run is planned to be held at Holtec's Camden technology centre in the coming months so that Ginna, Limerick, Nine Mile Point and Calvert Cliffs can participate and fulfill their dry run commitment for drying and backfill operations at their respective sites. "Considering the vital confinement function rendered by the lid-to-shell closure weld, Holtec employs the largest weld size in its canisters in the industry," said Steven Soler, Holtec's director of domestic site services. "I trust the extremely conservative welding requirement imposed on our MPCs provided the assurance of added safety margin to NRC officials."

https://www.world-nuclear-news.org/Articles/MPC-lid-welding-demonstration-passes-NRC-inspectio

Materion to supply coolant for Kairos molten salt reactor

World Nuclear News, May 27, 2020

The KP-FHR is an advanced reactor technology that uses uranium oxycarbide tristructural isotropic (TRISO) fuel in pebble form combined with a low-pressure fluoride salt coolant. Kairos notes that molten fluoride salts have outstanding capability to transfer heat at high temperature, excellent chemical stability, and the ability to retain radioactive fission products that might be released from fuel. Extensive experience and design information exists from the early US reactor development programme that studied and tested liquid-fueled molten salt reactors. The studies confirmed the compatibility of these salts with Kairos' high-temperature structural materials, enabling commercially attractive reliability and service life. Michael Laufer, CEO and co-founder of Kairos Power, said the agreement will help accelerate the deployment of its advanced reactor technology.

https://www.world-nuclear-news.org/Articles/Materion-to-supply-coolant-for-Kairos-molten-salt

North Koreans Accused of Laundering $2.5 Billion for Nuclear Program

Katie Benner

The New York Times, May 28, 2020

North Korean and Chinese citizens are operating a multibillion-dollar money laundering scheme to help fund the North's nuclear weapons program, the Justice Department said in an indictment unsealed on Thursday. The case underscores the Trump administration's inability to halt Pyongyang's nuclear weapons program through diplomacy. The department charged 28 North Koreans and five Chinese citizens of using a web of more than 250 shell companies to launder over $2.5 billion in assets through the international banking system, according to court documents filed in February by the U.S. attorney's office in Washington. The government claimed that the money flowed back to North Korea's primary, state-operated foreign exchange bank, the Foreign Trade Bank of the Democratic People's Republic of Korea. The North used the funds to support its weapons of mass destruction program.

"Through this indictment, the United States has signaled its commitment to hampering North Korea's ability to illegally access the U.S. financial system and limit its ability to use proceeds from illicit actions to enhance its illegal W.M.D. and ballistic missile programs," Michael Sherwin, the acting U.S. attorney in Washington, said in a statement.

https://www.nytimes.com/2020/05/28/us/politics/north-korea-money-laundering-nuclear-weapons.html

Biden calls Trump nuclear testing discussion reckless, dangerous

Reuters, May 28, 2020

Democratic presidential candidate Joe Biden described reported discussions by the Trump administration over whether to conduct a nuclear weapons test as reckless on Thursday, saying it could spur other countries to follow a dangerous U.S. lead. Republican President Donald Trump's administration considered whether to conduct its first nuclear test explosion since 1992, The Washington Post reported late on Friday, citing a senior official and two former officials familiar with the talks.

The meeting did not conclude with any agreement to conduct a nuclear test, and a decision was ultimately made to take other measures in response to threats posed by Russia and China, the report said. "The possibility that the Trump administration may resume nuclear explosive weapons testing in Nevada is as reckless as it is dangerous. We have not tested a device since 1992; we don't need to do so now," Biden said in a statement.

https://www.reuters.com/article/us-usa-election-biden-nuclear/biden-calls-trump-nuclear-testing-discussion-reckless-dangerous-idUSKBN2342GK

Nuclear watchdog says any US test would be 'grave challenge to peace'

Julian Borger

The Guardian, May 28, 2020

The head of the international watchdog monitoring nuclear tests has warned that a US return to testing being contemplated by the Trump administration would present a "grave challenge to global peace and security". Lassina Zerbo, the executive secretary of the Comprehensive Nuclear-Test-Ban Treaty Organisation (CTBTO), was responding to the news that staging the first US underground test in 28 years had been discussed at a high-level White House meeting on 15 May.

The idea was shelved for the time being, but appears not to have been rejected outright. Drew Walter, acting deputy assistant secretary of defence for nuclear matters, said this week that an underground nuclear test could be carried out within months "if the president directed". Arms control advocates said that the fact such a step was contemplated was disturbing, as it would be likely to lead to a return to nuclear testing by the world's other nuclear weapons powers, and the demise of the 1996 Comprehensive Nuclear-Test-Ban treaty (CTBT).

https://www.theguardian.com/world/2020/may/28/nuclear-watchdog-us-underground-test-challenge-to-peace

Europe

European NATO allies voice concern over U.S. plan to quit Open Skies
Reuters, May 22, 2020

European members of NATO told the United States on Friday they were uneasy about its plan to withdraw from the 35-nation Open Skies treaty that allows unarmed surveillance flights over member countries, an official of the defence alliance said. Senior officials in President Donald Trump's administration, which says Russia has repeatedly violated the treaty's terms, said on Thursday that Washington would formally pull out of Open Skies in six months. The U.S. move deepens doubts about whether Washington will seek to extend the 2010 New START accord, which imposes the last remaining limits on U.S. and Russian deployments of strategic nuclear arms to no more than 1,550 each. The accord expires in February.

Envoys to the North Atlantic Treaty Organization (NATO), meeting in response to the U.S. announcement, agreed "on the importance of arms control, and on the need to bring Russia back to compliance", the NATO official said. "A number of allies expressed concern that the U.S. may be leaving the treaty," the official added. Some allies worry that a U.S. exit from Open Skies, which will halt Russian overflights of the United States, could prompt Moscow's withdrawal. That would end overflights of Russia by the remaining members, weakening European security at a time when Russian-backed separatists hold parts of Ukraine and Georgia. NATO Secretary General Jens Stoltenberg said that for many years Russia had "imposed flight restrictions inconsistent with the treaty, including flight limitations over Kaliningrad, and restricting flights in Russia near its border with Georgia". "Russia's ongoing selective implementation has undermined the Open Skies Treaty," he said in a statement after the meeting of ambassadors to the Brussels-based alliance. He noted that Washington would reconsider its withdrawal if Russia respected the treaty's terms, and said NATO allies were engaging with Moscow to seek its early return to compliance.

https://www.reuters.com/article/us-usa-russia-openskies-nato/european-nato-allies-voice-concern-over-u-s-plan-to-quit-open-skies-idUSKBN22Y1FY

EDF UK hopes to submit nuclear plant planning application soon
Reuters, May 25, 2020

EDF UK said on Monday it hopes to submit a planning application soon regarding the Sizewell C nuclear plant in Britain after delays caused by the coronavirus outbreak. "We anticipate submitting the planning application for Sizewell C soon following a pause due to the coronavirus. We will confirm as soon as the planning application is submitted," EDF UK said in a statement. "It is important to note that public engagement in the process will not begin until the planning inspectorate accepts the application which takes around a month. "Sizewell C will deliver a major boost in skills, training, jobs and business contracts to Suffolk and across the UK and will be vital in helping the country reach its Net Zero carbon emissions target," the company said.
https://www.reuters.com/article/britain-nuclearpower-edf/edf-uk-hopes-to-submit-nuclear-plant-planning-application-soon-idUSFWN2D6046

Finland's new nuclear reactor hit by valve leak
Reuters, May 25, 2020

Finland's long-delayed Olkiluoto 3 (OL3) nuclear reactor was hit by another setback after the nation's safety watchdog reported valve problems in a component involved in the cooling process. The reactor in western Finland was built by a consortium of France's Areva and Germany's Siemens and had been due to start producing electricity in November this year. "A leak was observed in the mechanical control valve of one of the pressuriser safety valves," nuclear watchdog STUK said in a statement on Monday, adding that a full investigation is required before it can issue a nuclear fuel loading permit. "This is very serious," STUK's head of inspection, Iiro Paajanen, told Reuters, adding that the leak was in part of the reactor's primary circuit and involved in its cooling. However, Areva said the issue is unlikely to cause further delay for the reactor, which was originally due to be completed in 2009.

"One component had indeed been damaged, but we are 90% sure this will not cause a further delay for the planned start-up," Areva Chief Executive Philippe Soulie told Reuters. Reactor operator Teollisuuden Voima (TVO) applied for fuel loading on April 8, saying it expected a permit to be issued in a couple of months. However, it warned that the coronavirus pandemic would delay fuel loading from a planned June schedule, possibly pushing back the November start-up. Areva's Soulie said the French supplier is still in the process of updating its schedule because of the coronavirus outbreak. "It is difficult to judge the COVID-19 impact, but without it we would be loading fuel this summer as planned," Soulie said. Standard & Poor's downgraded TVO's long-term credit rating after the operator's announcement in April. "A few technical issues have appeared during the test runs and they will be solved before the fuel is loaded," TVO said in a statement. Although Finland's government issued an operating permit for the 1.6 gigawatt reactor in March 2019, OL3 needs final approval from STUK to load fuel and start production. "At present, the plant unit still has several outstanding issues before a loading permit can be issued," STUK wrote in its January-April safety report.

https://www.reuters.com/article/us-finland-nuclear-construction/finlands-new-nuclear-reactor-hit-by-valve-leak-idUSKBN23116M

EDF seeks building consent for Britain's Sizewell C nuclear plant
Susanna Twidale
Reuters, May 27, 2020

French utility EDF has submitted an application to Britain's regulators to build the 17-18 billion pound Sizewell C nuclear plant in the east of England. The application, known as a development consent order, made to the UK's Planning Inspectorate was expected in March but was delayed due to the coronavirus pandemic. Sizewell C is the second new nuclear plant EDF hopes to build in Britain, following the Hinkley Point C project which is expected to be completed in 2025. If built Sizewell C will be capable of providing enough electricity to power around 6 million homes and create 25,000 jobs and 1,000 apprenticeships, EDF said.

"Sizewell C ... will offer thousands of high-quality job opportunities and long-term employment," Humphrey Cadoux-Hudson, Managing Director, Sizewell C said in a statement. Some local residents have objected to the application being submitted while there are still restrictions on public gatherings that would allow local people to discuss such plans. EDF said it would put extra measures in place to make it easier for local communities to scrutinise the proposals, such as extending the pre-examination period.

https://www.reuters.com/article/us-britain-nuclearpower-edf/edf-seeks-building-consent-for-britains-sizewell-c-nuclear-plant-idUSKBN2323BP

France's EDF suffers second setback over nuclear supply contracts
Reuters, May 27, 2020

French court ruling on Wednesday ordered state-controlled utility EDF to accept Gazel Energy's suspension of supply contracts under a force majeure clause prompted by the coronavirus pandemic. In the decision, seen by Reuters, the president of the Paris commercial court said conditions for force majeure in ARENH nuclear power contracts between the two companies were "evidently met". The verdict followed a similar ruling last week that ordered EDF to accept Total's suspension of supply contracts. Total and Gazel Energy have sought to invoke the force majeure clause in contracts after the pandemic cut electricity demand by around 20% and pushed prices far below that specified in their existing agreements.

https://www.reuters.com/article/edf-nuclearpower-gazel/frances-edf-suffers-second-setback-over-nuclear-supply-contracts-idUSL8N2D93OF

Romania's Nuclearelectrica to end reactor talks with China's CGN
Reuters, May 28, 2020

Romania's economy ministry has asked state-owned power producer Nuclearelectrica to end negotiations with China General Nuclear (CGN) about the construction of two reactors at its plant on the river Danube, the company said. Nuclearelectrica has two 706 megawatt reactors, which account for roughly a fifth of Romania's power production, and wants to add two more. The firm will make the decision at a shareholders' meeting on June 12 following the ministry's request to "initiate the procedures regarding the ceasing of negotiations with CGN, as well as the ceasing of the legal effects," it said.

Nuclearelectrica's management will also need to come up with a new strategy over building additional nuclear power capacities. In 2019, the previous energy minister said negotiations should stop by the end of the year and that Nuclearelectrica could build a single new unit by itself. Nuclearelectrica had initially planned to build the two reactors in partnership with six European energy firms. Those firms withdrew one by one between 2010 and 2013, feeling the impact of Europe's then debt crisis. Western governments have grown increasingly concerned about possible

security threats posed by investments made by Chinese firms in their economies, including telecoms and nuclear power. Meanwhile, CGN is in a partnership with French utility EDF to build Britain's first new nuclear plant in decades at Hinkley Point in southwest England. Nuclearelectrica, in which Romania's energy ministry has an 80% stake, has a market capitalisation of 5.74 billion lei ($1.31 billion).

https://www.reuters.com/article/romania-nuclearelectrica/romanias-nuclearelectrica-to-end-reactor-talks-with-chinas-cgn-idUSL8N2DA0XN

Czech state ready to lend CEZ money to push nuclear expansion ahead
Reuters, May 28, 2020

The Czech government can lend majority state-owned utility CEZ money for a planned multi-billion dollar expansion at its Dukovany nuclear power plant, government and company officials said on Thursday. The Czech state has long been in talks with CEZ, in which it owns a 70% stake, about expanding its nuclear power fleet to replace blocks set to expire in coming decades, as well as lignite power plants to be retired in the 2030s. But costs and financing have been sticking points. On Thursday, state and company officials agreed a state loan for the construction of a new block, estimated to cost 160 billion crowns ($6.50 billion), was possible, pending European Commission approval. The two sides also agreed details of a plan under which the state could buy electricity from CEZ and take the power price risk off the company.

https://www.reuters.com/article/czech-nuclear/update-1-czech-state-ready-to-lend-cez-money-to-push-nuclear-expansion-ahead-idUSL8N2DA1SP

Regulator unaware of fresh delays at EDF's Flamanville 3 nuclear reactor
Reuters, May 28, 2020

French nuclear regulator ASN said on Thursday it was not aware of fresh delays in the construction of EDF's Flamanville 3 EPR nuclear reactor, despite the coronavirus outbreak disrupting works. State-controlled utility EDF, which operates France's 57 nuclear reactors, had previously said that the pandemic had slowed construction work at the reactor in the north of France, but it did not say if it would lead to further delays.

The project is running more than a decade behind schedule and it is now expected to start around 2023 after the regulator demanded EDF repair defective welds. ASN's head Bernard Doroszczuk, told a French Senate hearing on Thursday that some hundreds of welds, and eight other difficult-to-reach enclosure crossing welds, are still expected to be redone before the reactor is commissioned.

https://www.reuters.com/article/france-nuclearpower/regulator-unaware-of-fresh-delays-at-edfs-flamanville-3-nuclear-reactor-idUSL8N2DA3O9

France, Britain, Germany 'regret' U.S. end to Iran nuclear waivers
Reuters, May 30, 2020

France, Germany and Britain on Saturday criticised a U.S. decision to end sanctions waivers allowing work on Iranian nuclear sites designed to prevent weapons development. "We deeply regret the U.S. decision to end the three waivers," the three European countries said in a joint statement. "These projects, endorsed by U.N. Security Council Resolution 2231, serve the non-proliferation interests of all and provide the international community with assurances of the exclusively peaceful and safe

nature of Iranian nuclear activities." The waivers had allowed Russian, Chinese and European companies to work on the conversion of Iran's Arak heavy water reactor, the provision of enriched uranium for a Tehran research reactor, and the transfer of spent fuel abroad.

https://www.reuters.com/article/us-iran-nuclear-europe-waivers/france-britain-germany-regret-u-s-end-to-iran-nuclear-waivers-idUSKBN2360CM

Russia

Russian Navy anti-submarine ship arrives at No

rthern Fleet's base for Arctic drills

TASS News Agency, May 18, 2020

The small anti-submarine warfare ship Onega has completed its transit from the Belomorsk naval base to the Northern Fleet's main base of Severomorsk for drills, the Fleet's press office reported on Monday. "In Severomorsk, the small anti-submarine warfare ship Onega will replenish supplies and start practicing inter-operability with anti-subsurface warfare ships of the Kola Flotilla of All-Arms Forces in the Barents Sea. The drills will run in interaction with aviation and the crew of a nuclear-powered submarine that will counteract the anti-submarine forces, simulating a notional enemy," the press office said in a statement.

During its inter-base transit, the crew of the small anti-submarine warfare ship Onega already practiced a part of anti-subsurface assignments in the White and Barents Seas. Now the crew will be accomplishing a program of drills as part of a naval group, the press office specified. The drills will be held as part of scheduled combat training measures after the winter training period and the small anti-submarine warfare ships will accomplish a whole set of exercises, it said.

https://tass.com/defense/1157669

Novovoronezh II-1 passes load following checks

World Nuclear News, May 18, 2020

The unit, also known as Novovoronezh-6, may now be operated in the most efficient way and adapt to the needs of the power grid based on demand, state nuclear corporation Rosatom said. Pilot operation of the unit in load following mode had begun immediately after completion of registration of the relevant changes to the conditions of its operating licence, Rosatom said. On 1-10 May, the unit was operated in daily power control mode, which provides for several different changes during the day, depending on the requirements of the grid.

During the trial operation, plant personnel monitored changes at 96-71-96% and 96-46-96% of the nominal capacity. Data from the pilot operation will be used for the subsequent implementation of load following mode for the VVER-TOI reactor design, at Kursk in Russia and Paks in Hungary, Rosatom said, thus increasing the competitiveness of its new projects. The first VVER-TOI unit is under construction as part of the Kursk II nuclear power project. In October 2019, Novovoronezh II-2 became the third and latest VVER-1200 to be commissioned, following Novovoronezh II-1 and Leningrad II-1, which were launched in 2016 and 2017, respectively.

https://www.world-nuclear-news.org/Articles/Novovornezh-II-1-passes-load-following-checks

Rosatom keeps interest in NPP expansion in Czech Republic

TASS News Agency, May 18, 2020

Rosatom keeps interest in the project of the Dukovany Nuclear Power Plant (NPP) expansion in the Czech Republic and participated in consultations in February 2020, a spokesperson of the Russian nuclear corporation told TASS on Monday.

"We have reiterated that in case the tender on expansion of the Czech NPPs is announced, we will be glad to present our best offer and participate in the healthy market competition with the maximum localization and in partnership with Czech companies. In February 2020, at the invitation of CEZ [the Czech energy company — TASS], Rosatom participated in consultations along with other potential suppliers, where information about projects and business models of Rosatom was presented," the Russian company said.

The Czech online media outlet Denikn reported on Sunday that the Czech government had approved a classified document on April 27, whereby Russian and Chinese companies may not be allowed to participate in the tender on construction of the new power unit of the Dykovany NPP. The document stipulates that companies posing a strategic threat to the national security cannot be allowed to bid in the tender. The media source close to the tender preparation, which informed the media outlet about the document, mentioned Russia and China in this regard.

https://tass.com/economy/1157611

Moscow urges Washington to extend New START treaty, says senior diplomat

TASS News Agency, May 18, 2020

Moscow is calling on Washington to decide in favor of extending the New Start treaty, which expires in 2021, Deputy Foreign Minister Sergey Ryabkov said in an online lecture covering key topics on US foreign policy for students at MGIMO University on Monday. "We are running out of time to settle all these relevant issues. Nevertheless, we still have some [time]. And respectively, we are urging [our] US colleagues to opt for extending New START," the diplomat said.

According to Ryabkov, this is necessary to attain a stopgap so as to address the issues of arms control in a relatively calm environment, even by expanding it to bring on new participants in the talks along with aspects related to new technologies on this track. Ryabkov reiterated that after the treaty's term had passed the halfway mark, Moscow stated that Russia and the US were coming closer to the point where all negotiations concerning nuclear-missile technologies must become multilateral, and these talks will have to factor in all aspects influencing strategic stability. "Of course, missile defense is at the forefront. Much attention here must be paid to the emergence of striking power in space. Apart from this, there are quite a few other aspects without which it would be impossible to develop a new equation on the track of nuclear arms reduction - cyber means, the Prompt Global Strike system, and new technologies for conventional weapons," the diplomat explained.

https://tass.com/defense/1157617

Leningrad II-2 start-up postponed to April 2021

World Nuclear News, May 19, 2020

Rosatom has applied to delay by two months the commissioning of unit 2 of the Leningrad II nuclear power plant in western Russian owing to the departure from the country of foreign workers installing diesel generators at the site. According to a report by Russian newspaper Kommersant yesterday, Rosatom considers their exit - owing to safety considerations amid the coronavirus pandemic - to be force majeure and has requested to be released from any fine for not being able to meet its obligations to add the unit's generating capacity to the wholesale market.

Rosenergoatom, Rosatom's operator subsidiary, has submitted its request for force majeure to the Market Council - Russia's energy market regulator - whose supervisory board will on May 25 consider whether to approve delaying the launch of Leningrad II-2 to 1 April, 2021. The unit is under a capacity supply agreement that guarantees a return on investment from the wholesale energy market and which also incurs penalties for failure to meet deadlines, Kommersant said. However, due to force majeure, Rosenergoatom is asking to be released from penalties for February and March 2021, which is estimated to be RUB360 million (USD4.98 million).

https://www.world-nuclear-news.org/Articles/Leningrad-II-2-start-up-postponed-to-April-2021

Upgraded Borei-A nuclear-powered sub to be handed over to Russian Navy May 25 – source

TASS News Agency, May 21, 2020

A handover certificate for the Project 955A (Borei-A) first upgraded strategic nuclear-powered submarine Knyaz Vladimir will be signed on May 25, a source in Russia's defense sector told TASS on Thursday. "The submarine is currently undergoing underwater trials in the Whine Sea. By the end of the week, it will be back at Sevmash (the submarine's manufacturer - TASS). It is planned to sign a handover certificate on May 25," the source said, adding that it is planned to hoist the St. Andrew flag, i.e. to put the ship in service in the Russian Navy, in mid-June.

Sevmash's press service refrained from comments on the information from the source. Another source in the sector told TASS earlier that the Knyaz Vladimir had set off for the White Sea from Severodvinsk for final trials. Later, the Northern Fleet confirmed these reports, saying that the trials were meant to check the quality of the removal of problems exposed earlier.

https://tass.com/defense/1158679

Six diesel-electric subs to join Russia's Pacific Fleet soon

TASS News Agency, May 21, 2020

Six Project 636.3 diesel-electric submarines will join Russia's Pacific Fleet soon, Russian Navy Commander-in-Chief Admiral Nikolai Yevmenov said on Thursday. "In the short term, the submarine forces of the Pacific Fleet will receive a series of six Project 636.3 diesel-electric submarines currently under construction at the Admiralty Shipyard in St. Petersburg," the Navy chief said in a congratulatory telegram on the occasion of the 289th anniversary of Russia's Pacific Fleet.

Some life support systems of these submarines have been designed taking into account the specifics of their operation in the Far East, the Navy chief said. There are also plans to further arm the Pacific Fleet's submarine forces with 4th-generation nuclear-powered subs and develop the coastal infrastructure of their basing, he added.

https://tass.com/defense/1161565

Atommash completes core barrel for Rooppur-1 RPV

World Nuclear News, May 22, 2020

The equipment, a key part of the reactor internals, consists of six shells and an elliptical bottom. It is about 11 metres high and weighs 63 tonnes. Its upper section has 238 holes, each with a diameter of 196 millimetres, and two more with a diameter of 300m. These are arranged in six rows around the perimeter and are exit points for the reactor coolant. Its lower section has 1344 holes with diameters of between 40mm and 60mm, as well as 163 holes with a diameter of 226mm. These are for the installation of supports and to protect the fuel assemblies from mechanical particles entering them.

Atomenergomash is the supplier of all reactor equipment for the Rooppur plant, which is under construction on the eastern bank of the river Ganges and which will consist of two 1200MW power units.

https://www.world-nuclear-news.org/Articles/Atommash-completes

Russia commissions floating NPP

World Nuclear News, May 22, 2020

The floating nuclear power plant (FNPP) Akademik Lomonosov has been fully commissioned in Pevek, which is in the Chukotka region of Russia's Far East. The milestone was made official following the approval of Rosenergoatom General Director Andrey Petrov. Rosenergoatom is the operator subsidiary of the state nuclear corporation Rosatom.

Petrov's approval was possible after the regional branch of Russian regulator Rostechnadzor issued a "statement of conformity" for Akademik Lomonosov, which verifies that the FNPP had been built in accordance with all project documentation requirements. Additionally, the project had received approval from Rosprirodnadzor, the executive authority controlling and supervising activities in the field of environmental management. Rosenergoatom said today that receiving these documents meant the FNPP "fully adheres to all norms and regulations, including sanitary, epidemiological,

environmental, fire safety, construction requirements and federal standards". "Today we can consider the floating nuclear power plant construction project successfully completed. We have finished our main task for this year - fully commissioned the FNPP in Pevek, Chukotka region. Today, it officially becomes the 11th nuclear power plant in Russia and the northernmost one in the world," Petrov said.

https://www.world-nuclear-news.org/Articles/Russia-commissions-floating-NPP

US exiting Open Skies Treaty further undermines int'l security — ex-PM Medvedev

TASS News Agency, May 22, 2020

Deputy Chairman of the Russian Security Council Dmitry Medvedev has slammed Washington's decision to withdraw from the Treaty on Open Skies as another step of US authorities to further tear down the international security architecture, he said via his social media profiles Friday.

"The decision announced by Washington to quit the Treaty on Open Skies in the future is another step of the US down the path of dismantling the international security architecture that took decades to lay down," he lamented. According to Medvedev, Washington failed to clearly respond to Russia's questions regarding the American violations of the treaty. "The US could not clearly answer our valid questions regarding their own numerous violations of the treaty," he added. "In particular, they introduced a maximum flight distance over Hawaii, restrictions on flights over the Aleutian Islands and set unfounded limits on altitude of flight for our observation jets. And the list can go on."

https://tass.com/politics/1159433

Russia to discuss its new weapon systems only along with US missile shield, says diplomat

TASS News Agency, May 22, 2020

Russia is ready to talk with the United States on its advanced weapon systems on condition of discussing the American missile shield system in detail, Russian Deputy Foreign Minister Sergey Ryabkov said in an interview with Kommersant daily on Friday. "If they want to come to agreement, the way is open. We are ready to discuss advanced types [of armament] on condition of the US consent to discuss our concerns in detail. They are linked with the US missile shield, which is acquiring global nature, with a prospect of bringing strike weapons into outer space, developing conventional global strike systems and a whole number of other factors that directly affect strategic stability," the senior Russian diplomat said.

The US and its closest NATO allies are unready up to now to reconfirm the formula that there can be no victors in a nuclear war, the high-ranking Russian diplomat said. "The United States ascribes to us the concepts emerging in it itself about the possibility of winning a victory in a nuclear war. However, we, on the contrary, speak most actively against this approach," he stressed.

https://tass.com/defense/1159453

No evidence to NATO's commitment to arms control regime - Russian mission to NATO

TASS News Agency, May 23, 2020

There is no actual evidence to prove NATO's declared commitment to the arms control regime, Russia's mission to NATO told TASS after an extraordinary meeting of the North Atlantic Council called to discuss the United States' decision to withdraw from the Treaty on Open Skies. "After the NATO Council meeting on May 22, Secretary General Jens Stoltenberg came out with a statement on the situation around the Treaty on Open Skies. Notably, the statement two times points to the alliance's commitment to preserving the efficiency of the international arms control, nonproliferation and disarmament regime. Regrettably, there are no facts to prove it, to put it mildly," the mission said. "On the contrary, we see a political decision, which continues the destructive policy towards breaking down international arms control agreements - collapse of the ABM Treaty, refusal to ratify the Treaty on Conventional Forces in Europe, withdrawal from the Joint Comprehensive Plan of Action on the Iranian nuclear program, from the Intermediate-Range Nuclear Forces Treaty, and now from the Treaty on Open Skies. Obviously, it will hit the entire system of military security and stability in Europe."

The mission recalled that the United States "was the initiator of the development of the Open Skies Treaty and has been demonstrating its commitment to the treaty's implementation." "The biggest number of applications for observation missions over Russia came from the United States each year. It requested 21 such flights in 2020, or more than in the previous years. Having a quota for 42 flights, Russia makes only six to eight flights over the United States, the rest of the flights are performed over Europe," the mission added.

https://tass.com/russia/1159523

Rogozin: Elon Musk's idea to bomb Mars is cover-up for deployment of nukes in space

TASS News Agency, May 28, 2020

SpaceX founder Elon Musk's idea to bomb Mars with nuclear charges is abhorrent and inhumane. This is merely a cover to put nuclear weapons into space, Russian space agency Roscosmos head Dmitry Rogozin said Wednesday. "Recently, Elon Musk stated he wants to bomb Mars with nuclear charges to make its atmosphere more feasible for human life. It is absolutely obvious that the idea to bomb Mars with nuclear charges is absolutely abhorrent from a humanitarian standpoint. Who gave him right to destroy a planet?" Rogozin asked in an interview on YouTube.

"We understand that one thing stands behind all this demagogy: this is a cover for deployment of nuclear weapons in space. We see such attempts, we consider them unacceptable and we will oppose them as much as we can," Roscosmos head said, adding that Russia has what to respond to this with.

https://tass.com/science/1161221

Russia has no intention of giving up moratorium on nuclear testing — diplomat

TASS News Agency, May 28, 2020

Moscow will not drop the moratorium on nuclear arms tests as long as it is observed by other signatories to the treaty, Russian Foreign Ministry Spokeswoman Maria Zakharova told the media on Thursday. "Russia has no intention of giving up the 1992 moratorium on nuclear tests, as long as it is diligently observed by other nuclear states that are signatories to the Non-Proliferation Treaty," Zakharova said.

According to Zakharova, Moscow does not rule out that Washington may revoke its signature to the Comprehensive Nuclear Test Ban Treaty in the wake of US media reports that the United States was considering the possibility of resuming nuclear testing. She stressed that this rumor was launched after repeated claims by US officials at different levels that Russia allegedly failed to observe some US standards of a zero threshold in nuclear testing.

https://tass.com/politics/1161527

Shipbuilders deliver latest Borei-A nuclear-powered sub to Russian Navy

TASS News Agency, May 28, 2020

The improved Project 955A (Borei-A) strategic nuclear-powered lead submarine Knyaz Vladimir has been handed over to the Russian Navy, the press office of the United Shipbuilding Corporation reported on Thursday. "Today, on May 28, a ceremony was held at the Sevmash Shipyard (part of the United Shipbuilding Corporation) for signing an acceptance certificate for the strategic missile-carrying underwater cruiser Knyaz Vladimir," the press office said.

The document was signed by Chairman of the State Ship Acceptance Commission of the Russian Navy Main Command Alexei Poteshkin, Sevmash CEO Mikhail Budnichenko, Chief Designer of the Rubin Central Design Bureau for Marine Engineering Sergei Sukhanov and submarine commander Vladislav Druzhin. "The construction of the nuclear-powered submarine Knyaz Vladimir is a proof that we continue developing the best shipbuilding traditions based on the brilliant work and high responsibility of scientists, designers and shipbuilders," the press office quoted Sevmash CEO Budnichenko as saying.

https://tass.com/defense/1161565

Press review: Moscow-Berlin hacker controversy and Russia monitoring NATO subs in Arctic

TASS News Agecncy, May 29, 2020

Russian Ambassador to Berlin Sergey Nechaev was summoned by the German Foreign Ministry to talk about events from five years ago that could now jeopardize relations between the two countries. Berlin believes that back in 2015, Russian national Dmitry Badin, allegedly in collaboration with

Russian military intelligence, launched a hacker attack on the Bundestag and on Chancellor Angela Merkel's email. Recently, the German Federal Prosecutor's Office issued an arrest warrant for Badin but now Berlin will seek introducing sanctions against him and others named in connection with the attack. Experts told Kommersant individual sanctions will only hurt Russian-German relations.

The Russian embassy declined to comment, yet earlier Foreign Minister Lavrov noted no concrete evidence in the case while questioning why it took five years for Germany to take action. Meanwhile, the German Foreign Ministry noted that Berlin will seek the use of the so-called "EU cyber sanctions regime" against those responsible for the attack on the German Bundestag, including Badin.

https://tass.com/pressreview/1161667

West Asia

Iran

After U.S. warning, Iran says its navy will still operate in Gulf
Reuters, May 20, 2020

The Iranian navy will maintain regular missions in the Gulf, the ISNA news agency reported on Wednesday, a day after the United States warned mariners there to stay away from U.S. warships. "The naval units of the Islamic Republic of Iran in the Persian Gulf and the Gulf of Oman will continue their regular missions in accordance with professional principles as in the past," ISNA quoted an unnamed military official as saying. The U.S. warning to mariners followed U.S. President Donald Trump's threat last month to fire on any Iranian ships that harass U.S. Navy vessels. The Bahrain-based U.S. Naval Forces Central Command said in a statement its notice was "designed to enhance safety, minimize ambiguity and reduce the risk of miscalculation".

It follows an incident last month in which 11 Iranian vessels came close to U.S. Navy and Coast Guard ships in the Gulf in what the U.S. military called "dangerous and provocative" behaviour. Tehran blamed its longtime adversary for the incident. Friction between Tehran and Washington has risen since 2018, when Trump quit Iran's 2015 nuclear deal with six powers and reimposed sanctions on the country that crippled its economy. The head of Iran's elite Revolutionary Guards last month said Tehran would destroy U.S. warships if its security is threatened in the Gulf. Iran's clerical rulers consider the U.S. military presence in the Middle East a threat to the Islamic Republic's security.

https://www.reuters.com/article/us-iran-usa-navy/after-u-s-warning-iran-says-its-navy-will-still-operate-in-gulf-idUSKBN22W10G

Iranian fuel starts arriving in Venezuelan waters despite U.S. warning
Deisy Buitrago, Luc Cohen
Reuters, May 23, 2020

The first of five Iranian tankers carrying fuel for gasoline-starved Venezuela entered the South American country's exclusive economic zone on Saturday, despite a U.S. official's warning that Washington was considering a response to the shipment. The tanker, named Fortune, reached the country's waters at around 7:40 p.m. local time (1140 GMT) after passing north of the neighboring dual-island Caribbean nation of Trinidad and Tobago, according to vessel tracking data from Refinitiv Eikon. "The ships from the fraternal Islamic Republic of Iran are now in our exclusive economic zone," tweeted Tareck El Aissami, Venezuela's economy vice president and recently

named oil minister. Venezuelan state television showed images of a navy ship and aircraft preparing to meet it. The defense minister had pledged that the military would escort the tankers once they reached Venezuela's Exclusive Economic Zone (EEZ) due to what authorities described as threats from the United States.

The tanker flotilla is carrying a total of 1.53 million barrels of gasoline and alkylate to Venezuela, according to both governments, sources and calculations by TankerTrackers.com. The desperately needed shipments have caused a diplomatic standoff between the United States and Iran and Venezuela, which are under U.S. sanctions. Gasoline is scarce in Venezuela due to a near-complete breakdown of the OPEC nation's 1.3 million barrel-per-day refining network. Washington is considering measures in response, a senior U.S. official said without elaborating. The United States recently beefed up its naval presence in the Caribbean for what it called an expanded antidrug operation. A Pentagon spokesman said on Thursday he was unaware of any operations related to the Iranian cargoes.

https://docs.google.com/document/d/1z1eQxNAKzKtUiXo3AeqAWw3oz4uF-F5e_JMfeoenVBs/edit

U.S. to end sanctions waivers allowing some work at Iran nuclear sites
Reuters, May 27, 2020

The United States has decided to end sanctions waivers allowing Russian, Chinese and European firms to continue work at certain Iranian nuclear sites, a U.S. official and another source familiar with the matter said. The sources, who spoke on condition of anonymity, confirmed a report in the Washington Post that said the decision applied to waivers involving Iran's Arak heavy water research reactor, provision of enriched uranium for its Tehran Research Reactor and the transfer of spent and scrap research reactor fuel out of Iran. The sources said the United States would extend a separate waiver covering Iran's Bushehr nuclear power plant for 90 days.

https://www.reuters.com/article/usa-iran-nuclear/u-s-to-end-sanctions-waivers-allowing-some-work-at-iran-nuclear-sites-idUSL1N2D91OD

Iran says nuclear work will not be hurt by end of U.S. sanctions waivers
Reuters, May 28, 2020

A U.S. decision to terminate sanctions waivers that have allowed foreign companies to do some work at Iranian nuclear sites will not affect Iran's nuclear programme, Iran's Atomic Energy Organisation (AEOI) said on Thursday. The United States said on Wednesday it will terminate the waivers, which had allowed Russian, Chinese and European companies to carry out work at Iranian nuclear sites. The role of the foreign firms was agreed in Iran's nuclear deal with world powers in 2015, and was intended to help ensure Iran's nuclear programme would not be used to make weapons. "The ending of waivers for nuclear cooperation under (the nuclear deal) will not in practice have any effect on Iran's work," AEOI spokesman Behrouz Kamalvandi said, in remarks reported by ISNA news agency. "Of course America wants its actions to have an effect in line with pressure on Iran, but in practice nothing will happen."

Iran has scaled back its commitments under the deal but says it still abides by its overall terms. The waivers, which officials said expire on July 27, covered the conversion of Iran's Arak heavy water research reactor, the provision of enriched uranium for its Tehran Research Reactor and the transfer of spent and scrap reactor fuel abroad. Iran agreed to shut down the reactor at Arak - about 250 km

southwest of Tehran - under the 2015 deal. Iran was allowed to produce a limited amount of heavy water and Tehran has been working on redesigning the reactor. Tehran says it will make isotopes for medical and agricultural use. Work on redesigning the Arak reactor is continuing, albeit at a slow pace because of sanctions and problems with carrying out the nuclear deal, Kamalvandi said.

https://www.reuters.com/article/us-iran-usa-nuclear/iran-says-nuclear-work-will-not-be-hurt-by-end-of-u-s-sanctions-waivers-idUSKBN23426E

UAE

Final Barakah unit completes cold testing

World Nuclear News, May 19, 2020

Cold hydrostatic testing involves circulating water at high pressure in the reactor's primary circuit to verify welds, joints, pipes and components of the reactor coolant system and associated high-pressure systems. Prior to testing, Barakah 4's nuclear steam supply systems were flushed with demineralised water, and the reactor pressure vessel head and reactor coolant pump seals were installed. The testing involved increasing the pressure inside the unit's systems to 25% above what will be the normal operating pressure. ENEC CEO Mohamed Al Hammadi said the UAE's "decisive and proactive" response to the COVID-19 pandemic, alongside the actions of the company's workforce, had enabled the cold tests to be completed in adherence to the highest safety, quality, and security standards.

ENEC is in the final stages of construction of the four-unit Barakah plant, in the Al Dhafra region of Abu Dhabi. The Korean-supplied APR1400 reactors are being built by a consortium led by Korea Electric Power Corporation (KEPCO), and will be operated and maintained by Nawah Energy Company, an ENEC subisidiary which is partially owned by KEPCO. Overall construction of the four units is more than 94% complete. Unit 4 is more than 84% complete, unit 3 more than 92% and unit 2 more than 95%. Construction of Barakah 1 was completed in 2018 and ENEC says preparations are now in the final stages for the reactor to start up. When fully operational, the four units at Barakah will generate up to 25% of the UAE's electricity demand.

https://world-nuclear-news.org/Articles/Final-Barakah-unit-completes-cold-testing

Construction of Abu Dhabi nuclear plant on track despite coronavirus

Sami Zaatar

Gulf News, May 20, 2020

Construction at the Barakah Nuclear Plant continues to remain on track according to the Federal Authority for Nuclear Regulation (FANR), with the COVID-19 pandemic causing no major disruptions to the site. “The construction of Units 2-4 were halted somewhat – a few weeks – but have now resumed almost completely,” said Christer Viktorsson, director general of FANR during a virtual live session organised by the regulatory body. “Our common goal… from the beginning was to make sure that the nuclear site at Barakah is a COVID-19 free site and will remain so, which we have so far managed to do thanks to the great effort by the nuclear industry in the country,” Viktorsson said.

Viktorsson also highlighted how FANR was able to continue its inspections at the nuclear site, crediting the organisation's resident inspector policy. "A strong point of FANR is that we had resident inspectors in place, so we have maintained the resident inspectors at the Barakah site for longer periods than normal – two or three weeks, and then replacing them with others.

https://gulfnews.com/uae/construction-of-abu-dhabi-nuclear-plant-on-track-despite-coronavirus-1.71594110

Misc

COVID-19 to delay Brazil nuclear plant -Eletronuclear
Anthony Boadle
Reuters May 22, 2020

Lower demand for electricity and a currency slide during the coronavirus crisis will push completion of Brazil's third nuclear reactor into 2027, the head of state-run nuclear power company Eletronuclear told Reuters. Eletronuclear president Leonam Guimaraes said Brazil still plans to find a partner by 2023 to help finish and operate the long-delayed 1,400 megawatt Angra 3 nuclear reactor, with companies in China, Russia, France and South Korea among possible candidates. Construction, which began in 2010, is set to restart this year after a long delay caused by financial difficulties and corruption investigations. So far, 9 billion reais ($1.6 billion) have been spent on the project.

Guimaraes said the "brutal" 15-20% drop in power consumption caused by the coronavirus pandemic means future demand is uncertain. "It is a small delay we are talking about, from November 2026 to the next year," Guimaraes said in an interview on Thursday.
Volatility of the real, which has weakened by 28% against the dollar this year, is another uncertainty. But Guimaraes said the currency impact will be relatively small because only 35% of the 14.5 billion reais of investment needed to finish the plant will be paid in foreign currency, in euros, for the Framatome technology, majority owned by France's EDF.

https://www.reuters.com/article/nuclear-brazil/covid-19-to-delay-brazil-nuclear-plant-eletronuclear-idUSL1N2D319L

The Misguided Exile of Nuclear Power

Dan Lennon

The Environment Magazine, May 26, 2020

Due to media hype surrounding three major nuclear accidents, the risk of nuclear power has been greatly overstated and therefore public opinion is against it. As a result, this very valuable tool in our arsenal against climate change is being left on the sidelines. This will be seen someday as a mistake of enormous proportions.

https://emagazine.com/nuclear-power-now-more-than-ever/

Op-Ed

India

India Beat Pakistan in 1971 in War (Then Came the Nuclear Weapons)

Michael Peck

National Interest blog, May 22, 2020

The U.S. Navy accomplished was to chill U.S.-Indian relations for years. Even more disturbing were the Soviet cruisers, destroyers and submarines shadowing Task Force 74. A war between two Southwest Asian nations could have triggered a superpower showdown at sea, and perhaps World War III. In the end, India had demonstrated its military superiority. Pakistan lost half its territory and population. Perhaps more important, Pakistani illusions that an Islamic army could rout the "weak" Hindus had been disproved. Following the 1947 and 1965 wars, the 1971 war was the third major conflict between India and Pakistan. It was also the last. Despite some hostilities in Kargil and other spots on the border, India and Pakistan have not fought a major war in forty-five years.

Unfortunately, Pakistan's humiliation in 1971 spurred it into developing an atomic bomb. With India also armed with atomic weapons, South Asia now lives under the shadow of nuclear war. The next major India-Pakistan clash could be the last.

https://nationalinterest.org/blog/reboot/india-beat-pakistan-1971-war-then-came-nuclear-weapons-154856

4 dangerous weapons Pakistan would use against India if war erupts

Indian Express, Global Village Space, May 2020

Pakistan has invested in nuclear weapons as an inexpensive way to assure territorial integrity. Invading Pakistan means destruction and one of the surest ways to a nuclear war. So it can be easily said that Pakistan's nuclear program is successful.

Pakistan is a machiavellin state. It practices a brutal form of realpolitik that involves constantly playing one party against another. It succesfully distracts all parties from Pakistan's own weakness. In support of such a policy it has evolved a wide spectrum of destructive tools. All of these tools are arrayed against India. These are five of the most dangerous weapons India could face if it attempts to attack Pakistan.

https://www.globalvillagespace.com/4-dangerous-weapons-pakistan-would-use-against-india-if-war-erupts/

China

The world faces 10 risk factors in 2020: China's top think tank
Global Times, May 24, 2020

Global economic slump and rising international trade and technology conflict are the potential risks facing the world in 2020 amid the raging coronavirus pandemic, according to a report issued by the Chinese Academy of Social Sciences (CASS), a major government think tank. In the report released on Saturday, CASS predicted the top10 risks that may have a major negative impact on the world.

These 10 risk factors include global economy recession, escalation of international trade conflict, risks of political and even military confrontation between China and the US over the Taiwan question and the South China Sea, arms race triggered by US government's abolishing "The Intermediate-Range Nuclear Forces Treaty," new round of turmoil in the Middle East, tussle between India and Pakistan, rising tension on the Korean Peninsula, global social unrest, supply crisis in international crude oil market; and instability in Britain and the European Union caused by UK's exit from EU. The Report pointed out that the Sino-US relations are shifting from "half competition and half cooperation" to the current strategic rivalry between the two superpowers. From the perspective of the international political system, the changes are rooted in the structural changes in the relations between China and the US, which reshapes the US' perception of the so- called "threats from China". It predicted that with the US presidential election drawing nearer now and no matter which political party in US takes the White House, the US' general trend of comprehensively containing China in economic, political, security, and ideological fields is unlikely to change.

http://www.globaltimes.cn/content/1189268.shtml

USA

Ground U.S.-North Korean Diplomacy in International Law

Alicia Sanders-Zakre

National Interest Blog, May 18, 2020

In the years since the summits between President Donald Trump and North Korean leader Kim Jong-un in Singapore and Hanoi, U.S.-North Korean diplomacy has fizzled to a halt. This is a grave mistake. Both North Korea and the United States need to get serious about reviving diplomatic efforts to eliminate their nuclear weapons. In the midst of a global pandemic, it is clear that cooperative measures to tackle modern-day global security threats are critical. North Korean and U.S. nuclear weapons put the rest of the world at risk—and drain valuable resources from needed economic recovery efforts and social services. ICAN estimated that together North Korea and the United States spent $36 billion on nuclear weapons in 2019. The United States spent $35.4 billion and North Korea spent about $0.6 billion.

Medical services and supplies around the world are already stretched to the limits and cannot take on another health crisis. Any use of a nuclear weapon on a populated area would have catastrophic humanitarian and environmental consequences, overwhelming regional healthcare facilities and leaving generations-long radiation-linked diseases in its wake. That’s why doctors from around the world stressed the importance of disarmament during a pandemic in a March joint letter. That’s why North Korea and the United States must make nuclear disarmament an urgent priority. This process can start with both countries taking increasingly significant reciprocal steps to reduce their nuclear arsenals and tension in the region. A recent civil society statement to the postponed Nuclear Non-Proliferation Treaty Review Conference endorsed by more than eighty organizations encouraged North Korea and the United States to pursue an “action-for-action diplomatic strategy” including

steps such as sanctions relief and humanitarian assistance for North Korea, a joint statement on the end of the Korean War and formal negotiations on a peace treaty, concrete progress toward nuclear disarmament, and suspending military exercises.

https://nationalinterest.org/blog/korea-watch/ground-us-north-korean-diplomacy-international-law-155336

US nukes in Poland would not be a deterrent, but a MASSIVE provocation for Russia

Scott Ritter

Russian Times, May 19, 2020

The action that provoked the Grenell-Mosbacher media blitz were comments made by Rolf Mützenich, the chairman of the Social Democratic Party in Germany's parliament, calling for Germany to withdraw from its decades-old nuclear-sharing arrangement with NATO, noting that the deal had outlived its utility. The US currently maintains a force of some 20 B-61 nuclear bombs on German soil, where they are earmarked for delivery by German aircraft during war. Since 1979, Germany has maintained a force of Tornado fighter-bombers dedicated to the nuclear-sharing mission. The decision by Germany to buy 30 US-manufactured F/A-18 Super Hornet aircraft to replace the Tornado in its nuclear delivery mission prompted Mützenich's outburst.

Grenell and Mosbacher last teamed up to shake the foundations of NATO-based European security in September 2019, when Grenell's comments made during the course of an interview with a German newspaper sparked controversy among German politicians sensitive to US criticism of German defense spending levels. "It is actually offensive to assume that the US taxpayer must continue to pay to have 50,000-plus Americans in Germany," Grenell said, "but the Germans get to spend their surplus on domestic programs."

https://www.rt.com/op-ed/489068-nato-nuclear-poland-russia/

Will Joe Biden Go Back to the Iran Deal?

Matthew Petti

National Interest Blog, May 20, 2020

Former Vice President Joe Biden's foreign policy advisor said that a future Biden administration would return to the 2015 deal with Iran if the Iranian government did the same. Biden, the Democratic nominee for President, has increasingly signaled that he wants to renegotiate the international agreement with Iran. Anthony Blinken, one of Biden's top advisors, acknowledged twice this week that the United States would have to rejoin the original deal before asking for a new one.

"If Iran comes back into compliance with the deal, then yes, Joe Biden said we would do the same thing, but we would use that as a platform to try to build a stronger and longer deal working with our partners," he told CBS News during a Wednesday morning interview. "I think we'd have a decent

chance of doing that because our partners would be with us, not alienated from us," he said. "At the same time, much more likely to join us in trying to curb other actions by Iran that we find objectionable."

https://nationalinterest.org/blog/skeptics/will-joe-biden-go-back-iran-deal-156186

The Real Reason U.S. Patriot Missile Defense Batteries Are Leaving Saudi Arabia

Kirsten Fontenrose

National Interest Blog, May 23, 2020

The announcement that the United States is moving Patriot batteries out of Saudi Arabia was a surprise to analysts with a stove-piped focus on the Gulf. Immediately following the announcement came erroneous suppositions about the intent and the meaning of the move. The decision to remove Patriots from Saudi soil has very little to do with oil prices or changed assessments of the Iranian threat and everything to do with North Korea and China.

This spring while international attention focused on coronavirus, North Korea conducted nine missile launch tests in one month, a record according to Dr. Shane Smith of the National Defense University's Center for the Study of Weapons of Mass DestructionThis is particularly noteworthy in light of the Center for Nonproliferation Studies' (CNS) data indicating that North Korea's missile launch test success rate improved by almost 30 percent in 2019. On May 5, a report by imagery experts at Jane's Intelligence Review and the Center for Strategic and International Studies confirmed in the unclassified space the existence of a near-completed missile assembly and storage facility large enough to accommodate all known North Korean ballistic missiles and launchers. It is an almost braggadocious representation of the missile modernization program North Korea has pursued over the past decade while simultaneously feigning sincerity about curbing its nuclear pursuits.

https://nationalinterest.org/blog/buzz/real-reason-us-patriot-missile-defense-batteries-are-leaving-saudi-arabia-157426

Why American-North Korean Relations Will Be Stuck in the Status Quo for Now

Jacob Bogle

National Interest Blog, May 26, 2020

Status quo is the short answer to where U.S.-DPRK relations is most likely heading for the rest of the year. Between the ongoing pandemic, its crushing economic repercussions, and the upcoming presidential election, the U.S. lacks the bandwidth to realistically attempt any considerable new outreach. And Kim Jong-un needs only a moderate display of force to prove his health and vigor. Since short-range missile tests have already been carried out this year, it makes sense to continue that trajectory of moderate provocation that will not risk the wrath of an unpredictable U.S. president (particularly after the killing of Iran's Qasem Soleimani).

The eventual goal of denuclearization is one where the United States and North Korea are at fundamental odds. Not because one side wants peace and the other doesn't, but because both sides speak a diplomatic language the other continually misunderstands. To North Korea, nuclear weapons are not only the ultimate guarantor of regime survivability, they are also the fulfillment of decades of promises from Pyongyang. And the citizens know very well that part of their privation has been endured for the purpose of developing these weapons. The idea of giving them up without major security and financial guarantees is something that doesn't enter into North Korea's calculus.

https://nationalinterest.org/blog/korea-watch/why-american-north-korean-relations-will-be-stuck-status-quo-now-157766

Russia

Russia Is Training To Kill NATO Submarines

Peter Suciu

National Interest Blog, May 16, 2020

The Russian Navy has been increasing its drills, including exercises in the Black Sea, the Baltic Sea, the Mediterranean Ocean and recently in the Barents Sea. The drills in the Arctic came after U.S. and UK warships operated in the region for the first time since the Cold War. Russia's Northern Fleet, which maintains the nation's naval strategic nuclear forces, is headquartered there and has numerous bases in the Murmansk region. The Barents Sea is now an area of renewed attention for the U.S. and its NATO allies amid tensions with Russia, and the U.S. Navy and its partners could be spending more time in the region to gain experience in dealing with the challenges—including the extreme cold—that the area poses to naval operations Business Insider reported.

Given that the U.S. and its allies could be seen to have been operating in what is essentially Russia's backyard, it makes sense that Russia has stepped up its efforts to train in new anti-submarine tactics. The new tactic was drafted last year, but only recently tested by the Russian Navy's anti-submarine force according to reports from Navy Recognition. The group of warships includes several small anti-submarine vessels and some of the Project 22160 corvettes, which are equipped with modern sonars to detect submarines, torpedoes, and underwater combat swimmers. The corvette could provide guidance to the other warships that can engage an enemy with torpedoes and depth charges.

https://nationalinterest.org/blog/buzz/russia-training-kill-nato-submarines-154391

Russia's Tu-22M3M Supersonic Bomber: Now Hypersonic?

Peter Suciu

National Interest Blog, May 27, 2020

A second prototype of the Russian Air Force's Tu-22M3M supersonic bomber underwent trials at hypersonic speeds during a fourth test flight, Russian state media reported. This second prototype

successfully performed its maiden flight in March of this year, and the aim of that flight was to assess the takeoff and landing characteristics, as well as to test the information control system. "Five flights have already been performed," a defense industry source told TASS. "The hypersound speed was achieved during the fourth flight. The aircraft demonstrated good stability and controllability. Modified systems and equipment are performing normally during the trials."

The Tu-22M3M is a modernized version of the Tu-22M3 long-range supersonic missile-carrying bomber with the variable-sweep wing. It boasts 80 percent new avionics over the original Tu-22M. In addition, the upgrade provides new electronic equipment including navigation, communication, sights, engine controls, fuel mechanisms and electronic warfare. These upgrades should increase navigation precision, provide simplified maintenance and preflight preparation. The first upgraded prototype performed its debut flight in late December 2018. That aircraft carried no armament and in a flight lasting thirty-seven minutes it proceeded at an altitude of fifteen hundred meters. As of October of last year, the first prototype had completed eighteen successful test flights.

https://nationalinterest.org/blog/buzz/russias-tu-22m3m-supersonic-bomber-now-hypersonic-158061

Russia's Project 955A Borei-A Class Submarine Completes Sea Trials

Peter Suciu

National Interest Blog, May 29, 2020

The first of the Russian Navy's upgraded Project 955A Borei-class ballistic missile submarines has completed its sea and weapons trial this month. Russian state media reported that the nuclear-powered Knyaz Vladmir conducted its sea trials in the White Sea, and has headed back to Sevmash, the submarine's manufacturer, before the official hand-over to the Russian Navy. The Russian Ministry of Defense's press office reported that tugboats of the White Sea naval base and the Mikhail Rudnitsky rescue vessel were used to provide search-and-rescue support during the trials of the submarine. The trials were to address an undisclosed "problem" that had been exposed earlier with the boat.

Those sea trials took place above and underwater this month, and that followed the testing of its missile and submerged torpedo firing, which was completed late last year. During those weapons tests the submarine was supported by forces of the Russian Nothern Fleet's White Sea naval base.

https://nationalinterest.org/blog/buzz/russia%E2%80%99s-project-955a-borei-class-submarine-completes-sea-trials-158326

East Asia

North Korea

Growing nuclear risks
Korea Times, May 25, 2020

North Korea is again raising tensions on the Korean Peninsula by stating it will bolster its nuclear weapons capabilities. This worrisome move was highlighted Sunday in a report from the North's

official Korean Central News Agency (KCNA) that Kim Jong-un presided over a meeting of the Central Military Commission of the ruling Workers' Party to discuss "new policies for further increasing the nuclear war deterrence of the country." It is difficult to figure out what the "new policies" are because Pyongyang gave no further details. Yet some pundits have expressed concerns about the report, raising the possibility of the Kim regime conducting tests of new intercontinental ballistic missiles (ICBM) or submarine-launched ballistic missiles (SLBM). At the end of last year, the North threatened to develop "new strategic weapons" amid deadlocked denuclearization talks with the U.S.

The KCNA report could therefore imply that the North will boost its nuclear war deterrence with new ICBMs or SLBMs having greater ranges. If that is the case, Kim could run the risk of scrapping his moratorium on nuclear tests and ICBM launches. This could further jeopardize the stalled nuclear negotiations between Pyongyang and Washington. We can hardly understand why the Kim regime is trying to escalate tensions and turn the clock back to nuclear saber-rattling. The latest move comes amid the global spread of the coronavirus pandemic. Pyongyang has yet to report any infections in the reclusive country; but it has been widely reported that the North is not exempt from the attack of the highly contagious disease. Thus the North should come out of its isolation and cooperate with the international community to prevent and contain COVID-19.

http://www.koreatimes.co.kr/www/opinion/2020/05/137_290107.html

Nuclear delusions fuel North Korean ambitions
Brad Glosserman
Japan Times, May 27, 2020

North Korea warned this week that it was strengthening its “nuclear war deterrence.” Experts don’t know what that means, but they are worried. Given North Korean leader Kim Jong Un’s promise to develop a new strategic weapon if the United States did not build a new relationship with his country, concern is justified. Japan should be especially worried, not just because it has bitter, longstanding issues with North Korea, but because this country is on the top of Pyongyang’s target list. Kim declared last year that U.S. President Donald Trump had until the end of 2019 to make a “bold decision” to end his country’s “hostile policy” toward North Korea. Trump made historical and unprecedented gestures to Kim but the two men proved unable, even after two summits and, according to Trump, “falling in love” as a result of Kim’s “beautiful letters,” to go beyond vague promises of denuclearization.

https://www.japantimes.co.jp/opinion/2020/05/27/commentary/world-commentary/nuclear-delusions-fuel-north-korean-ambitions/#.XtX_QIgvPS9

North Korea warning: Mystery object at nuclear sub launch site leaves analysts baffled
Ciaran Mcgrath
Express, May 31, 2020

A Mystery object spotted at a secretive North Korea military base - where Supreme Leader Kim Jong-un is believed to be plotting to launch a submarine equipped with nuclear missiles - has left experts baffled. Satellite imagery of Sinpo South Shipyard released by Planet Labs captured the large object on May 27 - but its purpose, or even what it actually is, remains unclear. Analysts Jack Liu and and Peter Makowsky, writing for the 38 North website, which is dedicated to security issues related to the Hermit State, flagged the situation in an article posted.

They said: "Recent reports indicate that South Korean intelligence is closely monitoring activities at North Korea's Sinpo South Shipyard for preparations to launch a new ballistic missile submarine. "However, no notable activity has been observed at the construction and finishing halls or their associated parts yard on commercial satellite imagery. "While the awning at the secure boat basin obscures whether or not a submarine is berthed there, the submersible barge is partially visible. Satellite imagery of Sinpo South Shipyard released by Planet Labs captured the large object on May 27

https://www.express.co.uk/news/world/1289196/north-korea-news-nuclear-submarine-missile-launch-mystery-object-kim-jong-un

South Korea

'Inter-Korean exchange should accompany North's disarmament'

Choi Si-young
Korea Herald, May 27, 2020

South Korea should make sure that inter-Korean exchanges proceed in parallel with North Korea's denuclearization, the US State Department said Tuesday, reiterating its earlier stance made public several times.

The department, asked by Voice of America about Seoul's latest decision to ease restrictions on engagement with Pyongyang, said Washington supports inter-Korean cooperation, but that it should be in "lockstep with progress on denuclearization." Seoul's Ministry of Unification said it would amend a law on inter-Korean exchange so that citizens here could have greater freedom to interact with North Koreans. Under the revision, South Koreans would still have to report contact with the North to the ministry, but could do so after the encounter if advance notice were not feasible. Chance encounters would not have to be reported.

http://www.koreaherald.com/view.php?ud=20200527000730&ACE_SEARCH=1

ROK-US disagree on exercises; OPCON transition may be delayed
Kang Seung-woo
Korea Times, May 31, 2020

South Korea and the United States are yet to reach agreement over how to execute planned joint military exercises in August, according to sources, Sunday, raising speculation that the disagreement may expand to pushing back the transfer of operational control (OPCON) of South Korean troops during wartime from Washington to Seoul. Hoping that it will regain OPCON by 2022, South Korea wants the upcoming exercises to be focused on assessing its relevant capabilities, but the U.S. is stressing that they need to focus on maintaining the joint military posture that may have been undermined following the postponement of annual drills in the first half of the year due to the COVID-19 outbreak.

The OPCON transition calls on a South Korean general to command the Combined Forces Command (CFC), with a U.S. general taking a supportive role. Currently, the CFC is headed by the U.S. Forces Korea (USFK) commander who also leads the United Nations Command (UNC). In February, the allies decided to indefinitely delay their annual joint military exercises amid a surge in COVID-19 cases across the Korean Peninsula, so the U.S. military believes that the upcoming exercises in

August should serve as grounds to prove their combat readiness rather than preparing for the OPCON transfer, according to the sources.

Some observers in military circles believe that the UNC was seeking to maintain its presence on the peninsula through the incident. "After the OPCON transition, the U.S. will assume a supporting role on the peninsula," Park said. "Considering such a situation, the U.S. is seemingly seeking to exert influence here through the UNC. In addition, I think that the U.S. also has a plan to use the UNC as a replacement for the South Korea-led CFC — although the U.S. government has denied this speculation."

http://www.koreatimes.co.kr/www/nation/2020/05/113_290421.html

Think Tanks

US nukes in Poland are a truly bad idea

Steven Pifer

Brookings, May 18, 2020

On May 15, the U.S. Ambassador in Warsaw, Georgette Mosbacher, suggested relocating U.S. nuclear weapons based in Germany to Poland. One hopes this was just a mistake by a political appointee unfamiliar with NATO nuclear weapons issues, not a reflection of official U.S. government thinking. Moving nuclear weapons to Poland would prove very problematic.

https://www.brookings.edu/blog/order-from-chaos/2020/05/18/us-nukes-in-poland-are-a-truly-bad-idea/

How COVID-19 might affect US nuclear weapons and planning

Steven Pifer

Brookings, May 18, 2020

The Department of Defense has begun to ratchet up spending to recapitalize the U.S. strategic nuclear triad and its supporting infrastructure, as several programs move from research and development into the procurement phase. The projected Pentagon expenditures are at least $167 billion from 2021-2025. This amount does not include the large nuclear warhead sustainment and modernization costs funded by the Department of Energy, projected to cost $81 billion over the next five years.

Nuclear forces require modernization, but that will entail opportunity costs. In a budget environment that offers little prospect of greater defense spending, especially in the COVID19 era, more money for nuclear forces will mean less funding for conventional capabilities. That has potentially negative consequences for the security of the United States and its allies. While nuclear forces provide day-to-day deterrence, the Pentagon leadership spends most of its time thinking about how to employ conventional forces to manage security challenges around the world. The renewed focus on great power competition further elevates the importance of conventional forces. It is important to get the balance between nuclear and conventional forces right, particularly as the most likely path to use of

nuclear arms would be an escalation of a conventional conflict. Having robust conventional forces to prevail in or deter a conventional conflict in the first place could avert a nuclear crisis or worse.

https://www.brookings.edu/blog/order-from-chaos/2020/05/18/how-covid-19-might-affect-us-nuclear-weapons-and-planning/

US to withdraw from Open Skies Treaty

Rakesh Sood

Observer Research Foundation, May 25, 2020

On 21 May, US President Donald Trump announced that US was serving notice of its intent to withdraw from the Open Skies Treaty (OST). Concluded in 1992, the OST entered into force in 2002 and currently has 35 members (Kyrgyzstan is a signatory but hasn't yet ratified). Canada and Hungary are the depositary states. The reason provided is continuing Russian non-compliance with the OST which has led US to conclude that it is no longer in US interest to remain a party. Trump added that the US decision will take effect after six months (as provided in the treaty text) but US can reconsider if Russia returns to full compliance.

https://www.orfonline.org/expert-speak/us-withdraw-open-skies-treaty-66697/

Could a US nuclear test be a fortuitous opportunity for India?

Manoj Joshi

Observer Research Foundation, May 27, 2020

A report last week in The Washington Post highlighting that the US government was considering the resumption of nuclear weapons tests could be good news for India. If the US breaks the informal ban that it has in place since its last test in September 1992, it provides India an opportunity to also follow suit, and confirm the design of its thermonuclear bomb, something it failed to do in 1998 tests. This remains a critical gap in India's nuclear force posture. Suspicions in the US that Russia and China may be breaching their commitments not to test have been around for the past two decades at least, with some of the issues related to the interpretation of the Comprehensive Test Ban Treaty (CTBT) in relation to hydronuclear and sub-critical testing.

But it is only now that the US has acted in a range of areas. The Trump Administration which terminated the Intermediate Range Nuclear Forces (INF) treaty last year and has also taken the decision to fabricate low-yield nuclear weapons also believes that both Russia and China have been conducting very low-yield nuclear tests. The US itself does sub-critical tests with a zero yield, as required by the CTBT, which can test the components of a weapon. It also has a huge National Ignition Facility (NIF) that enables it to "maintain the reliability and safety of the US nuclear deterrent without full-scale testing." Though, officially, India claims that it has thermonuclear weapons, the reality is that the test conducted on May 11 1998 was a fizz. Not only was it not picked

up by anyone else in the world, it was not even picked up by an Aviation Research Centre (ARC) facility in Karnal, near Delhi, which has been around since the 1960s to detect Chinese nuclear tests.

https://www.orfonline.org/expert-speak/could-a-us-nuclear-test-be-a-fortuitous-opportunity-for-india-66831/

Don't resume nuclear testing

Steven Pifer

Brookings, May 28, 2020

Senior U.S. officials reportedly have discussed conducting a nuclear weapons test for the first time in 28 years. Some apparently believe that doing so would provide leverage to persuade Russia and China to agree to Washington's proposal for a trilateral nuclear arms negotiation.

In fact, a U.S. nuclear test would most likely have a very different effect: opening the door for tests by other countries to develop more sophisticated nuclear weapons. A smarter policy would maintain the current moratorium on nuclear testing, and ratify and seek to bring into force the 1996 Comprehensive Test Ban Treaty (CTBT). Several media sources have reported that a recent Deputies Committee meeting (composed of deputy or under secretaries of the Departments of State, Defense and Energy and senior representatives from other relevant agencies such as the Joint Chiefs) discussed a "rapid [nuclear] test." It was suggested that this could provide leverage to press Moscow and Beijing to take up the Trump administration's proposal for a trilateral negotiation on nuclear arms.

https://www.brookings.edu/blog/order-from-chaos/2020/05/28/dont-resume-nuclear-testing/

The NPT in 1995: The Terms for Indefinite Extension

Daryl G. Kimball and Randy Rydell

Arms Control Association, May 2020

The fifth review conference of the nuclear Nonproliferation Treaty (NPT), held from April to May 1995, like previous review conferences sought to assess implementation and compliance with the treaty's obligations and to explore ways to address shortcomings. The 1995 NPT Review and Extension Conference also had another formal purpose. Article X of the NPT called for a conference of states-parties to be held 25 years after the treaty's entry into force in order "to decide whether the [t]reaty shall continue in force indefinitely, or shall be extended for an additional fixed period or periods."

Although the treaty provided that the extension would be determined by a majority vote, the parties felt that such a key decision should, if possible, be reached by consensus. Achieving that consensus proved to be one of the most difficult challenges in the history of multilateral diplomacy.

https://www.armscontrol.org/act/2020-05/features/npt-1995-terms-indefinite-extension

Contribute Articles

Indian Pugwash Society welcomes research articles from students, researchers and faculties on Space, Missile, nuclear technology, WMD proliferation, arms control, disarmament, export controls and other related issues. Articles should be crisply written and should address contemporary debates in the policy arena. Manuscripts submitted for the consideration of the Indian Pugwash Society should be original contributions and should not have been submitted for consideration anywhere else. For further assistance, please contact us at: indianpugwashsociety@gmail.com

The Indian Pugwash Society aims to promote the study, discussion, and knowledge of and to stimulate general interest in, and to diffuse knowledge in regards to problems relating on WMD proliferation, arms control, disarmament, space security, export controls, nuclear technology and other related issues. This newsletter is part of the project "Emerging Nuclear Order in Asia: Implications for India" sanctioned to us by Department of Atomic Energy-Board of Research in Nuclear Sciences (DAE-BRNS).

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