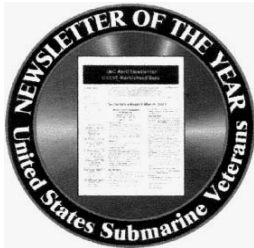


American Submariners Inc.
 4370 Twain Ave.
 San Diego, CA 92120-3404



The Silent Sentinel

MAY 2015



Our Creed and Purpose

To perpetuate the memory of our shipmates who gave their lives in the pursuit of their duties while serving their country. That their dedication, deeds, and supreme sacrifice be a constant source of motivation toward greater accomplishments. Pledge loyalty and patriotism to the United States of America and its Constitution.

In addition to perpetuating the memory of departed shipmates, we shall provide a way for all Submariners to gather for the mutual benefit and enjoyment. Our common heritage as Submariners shall be Strengthened by camaraderie. We support a strong U.S. Submarine Force.

The organization will engage in various projects and deeds that will bring about the perpetual remembrance of those shipmates who have given the supreme sacrifice. The organization will also endeavor to educate all third parties it comes in contact with about the services our submarine brothers performed and how their sacrifices made possible the freedom and lifestyle we enjoy today.



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Jack Lester

Jack Kane

U.S. Submarine Veterans San Diego Base

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The Silent Sentinel via Email

To all of my Shipmates and families who currently receive our Great newsletter via the mail who would like it sent via email or continue to receive it via mail, please fill out the form and mail it to the base or myself. We are trying to cut the cost of the newsletter down from \$3700 to about \$1900 a year. By receiving the Silent Sentinel via email will cut down the printing and mailing cost. The other plus to receiving it via email is you can save it on your computer and not have the paper lying around the house.

A subscription to the Silent Sentinel newsletter will be available to surviving family members via internet email, at no charge, upon notification of the Membership Chairman. If a printed hard-copy is preferred, via US Post Office delivery, an annual donation of \$5.00 will be requested to cover costs.

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DUE TO LOGISTICS CONSTRAINTS, ALL INPUTS FOR THE SILENT SENTINEL MUST BE IN MY HAND NO LATER THAN *ONE WEEK* AFTER THE MONTHLY MEETING. IF I DO NOT RECEIVE IT BY THIS TIME, THE ITEM WILL NOT GET IN. NO EXCEPTIONS! MIKE

MAY Meeting

Our monthly meeting is held on the second Tuesday of the month at VFW Post 3787, 4370 Twain Ave., San Diego. Our next meeting will be on 12 MAY, 2015. The post is located one-half block West of Mission Gorge Road, just north of I-8. The meeting begins at 7 p.m. The E-Board meets one hour earlier at 6 p.m.

***Check us out on the World Wide Web
www.ussvisandiego.org***

BINNACLE LIST

George Koury, Frank Walker, R.C. Thompson. on the binnacle list.

Submarine Losses in May

Originally Compiled by C J Glassford



USS Lagarto (SS-371)

Lost on May 3, 1945 with the loss of 86 men near the Gulf of Siam. On her 2nd war patrol, she is believed to have been lost to a radar equipped minelayer. This minelayer was sunk by the USS Hawkbill (SS-366) 2 weeks later.

USS Scorpion (SSN-589)

USS Scorpion (SSN-589) was returning to Norfolk, VA. from a Mediterranean deployment. On May 22, 1968 she reported her position to be about 50 miles south of the Azores. Scorpion was never heard from again. The exact cause of her loss has never been determined. 99 officers and men were lost.

USS Squalus (SS-192)

On May 23, 1939 USS Squalus suffered a catastrophic valve failure during a test dive off the Isle of Shoals. Partially

flooded, the submarine sank to the bottom and came to rest keel down in 240 feet of water. Commander Charles Momsen and Navy divers on the USS Falcon (ASR-2) rescued 33 survivors use the diving bell he invented. 26 men drowned in the after compartments. Later Squalus was raised and recommissioned as the USS Sailfish. In an ironic turn of fate, Sailfish sank the Japanese aircraft carrier carrying surviving crew members from Sculpin, which had located Squalus in 1939. Only one of survived after spending the rest of the war as slave laborers in Japan.

USS Stickleback (SS-415)

Lost on May 28, 1958 when it sank off Hawaii while under tow after collision with USS Silverstein (DE-534). The entire crew was taken off prior to sinking.



San Diego Base, United States Submarine Veterans Inc. Minutes of Meeting - 14 April 2015

1900 - Base Senior Vice Commander Warren Branges called the meeting to order
Conducted Opening Exercises - Pledge of Allegiance lead by Secretary Jack Kane
Chaplain Russ Mohedano lead prayer and conducted Tolling of the Boats lost in the month of April.

Senior Vice Commander recognized Past Commanders and dignitaries, welcomed Guests and new members.

Secretary Jack Kane announced 34 (33 members and 1 guests) present.

The minutes of the 10 March 2015 meeting were approved as published in the Sentinel.

Treasurer David Ball gave his report. Checking Balance \$4456.62 with total assets of \$19,699.36 which includes \$2842.00 in the Charlie Marin Scholarship Fund. A copy of the Treasurer's Report will be filed with these minutes.

Base Commander Called For Committee Reports

Chaplain Russ Mohedano reported the following on the Binnacle List: George Koury, Frank Walker, R.C. Thompson.

Parade Chair Joel Eikam announced the next parade is 25 April at Linda Vista starting at 11:00 am. We will also attend the parade in Rancho Penasquitos on 2 May.

Membership Chair Ray Febrache announced 281 members with new members pending with National.

Scholarship Chair Paul Hitchcock announced he had two applications in hand. The deadline is tomorrow (15 April) for applications. Paul will send packages to the selection committee volunteers and selections would be done this month. Scholarships will be presented at the June meeting.

Breakfast Committee and 52 Boat Memorial Chair Warren Branges reported the Breakfast held 29 March netted \$381.50 serving 96 patrons. Next Breakfast is 31 May 2015.

Warren reported that the 52 Boat Memorial now has 30 new plaques in place with a target date for the remainder to be in place of 16 May (Armed Forces Day). The Memorial Committee is pursuing the paperwork to convert the Memorial to a 501.3(c) Charity.

Senior Vice Commander shared the following in David Kauppinen's absence. The Float Committee is working on replacing the side banners. The Float will be displayed at the Admiral Kidd Club on 24 April during the Tolling of the Boats and Old Timers Luncheon.

1928 - Senior Vice Commander called for a break.

1935 - Senior Vice Commander called the meeting back to order. 40/30/30 Drawing was held.

1935 - Unfinished Business

Senior Vice Commander mentioned the Western Region Roundup to be held 26 April through 1 May at Aquarius Casino Resort in Laughlin NV. The Base Commander and others will attend. Members are encouraged to make their reservations if they are attending.

Treasurer David Ball modifications to the Budget and the membership voted to approve the budget as amended. A copy of the amended budget will be filed with these minutes.

Senior Vice Commander noted that only a few members were signed up for the Tolling of the Boats and Old Timers Luncheon on 24 April. The Tolling Ceremony will begin at 1100 and the Luncheon will begin at 1230. Captain Warner (CO Naval Base Point Loma) is the Luncheon Speaker. Tolling of the Boats Ceremony is no cost. Luncheon is \$20 to paid at the door.

Senior Vice Commander reported that San Diego Base would sponsor Benny Williams (WWII SUBVET) at the Submarine Birthday Ball on 26 April. Shipmate and WWII SUBVET Seymour Phillips was offered a sponsorship but he is unable to change previous plans and will be unable to attend.

1950 - New Business

Senior Vice Commander Warren Branges opened a discussion on future fund raising initiatives and asked for input from the membership. Revenue from the five periodic Breakfasts is declining due to rising costs and lower attendance. Some attendance drop-off is due to the changing demographics of the surrounding neighborhood - a large mobile home park has recently closed and some regular customers have moved elsewhere.

Some ideas for future fund raising are:

- Toner Cartridge recycling.
- Memorabilia sales - Silent Auctions
- Modifying the Raffle Split.

Toner cartridge recycling and memorabilia sales were tabled for discussion at subsequent meetings.

A motion was made, seconded and passed to change the monthly Raffle split to 50/50. Fifty percent to the winner and the other Fifty percent to the Base Operating funds.

1959 - Good of the Order

It was announced that Shipmate and long-time Base Member Seymour Phillips is re-locating to Seattle to be closer to his family. Many well wishes were extended to Seymour and it was noted that we would miss him at our meetings and functions.

Shipmate Tom Polen noted that anyone needing tax prep help could get assistance at Marine Corp Air Station Miramar.

The Meeting was adjourned at 2005.

Sailing List for 14 April 2015

Fred Fomby	Warren Branges	Phil Richeson
David Ball	Russ Mohedano	Benny Williams
Juanita Williams (Guest)	Ed Farley	Ed Welch
Tom Polen	Nihil D. Smith	Bud Rolleson
Jim Harer	William Johnston	Mac McCormick
Mert Weltzien	Jessie Taylor	Jack Lester
Jack Kane	Mike Hyman	Bill Earl
Chris Stafford	Seymour Phillips	Peter Lary
Paul Hitchcock	R. L. Febrache	Ron Gorance
W.J. (Joe) Sasser	Dennis Mortensen	Jim Bilka
Manny Burciaga	Mike Cosgrove	Al Durkee (WD4 Bremerton Base)
Joel Eikam		

Current News

“Plataginet, I will; and like thee, Nero,
Play on the lute, beholding the towns burn” (*Henry VI*, Shakespeare)

A First: Japan Will Share Classified Submarine Technical Data With Australia
Ankit Panda, The Diplomat, May 7

The battle for Australia’s Collins-class replacement project continues, and Japan is getting ever more serious about its Soryu-class offering. The Japan Times reports, citing Japanese officials, that Tokyo will take the unprecedented step of sharing classified submarine data with Canberra. Japan’s Soryu submarines, widely regarded as one of the most advanced non-nuclear modern submarines, are competing with French and German offerings for Australia’s lucrative Collins-class successor program. The deal is expected to be the largest in Australian defense spending history, amounting to over A\$50 billion by some estimates.

If Japan shares classified submarine data with Australia, it would mark the “first disclosure of such classified technical data to a foreign military other than that of ally the United States,” notes The Japan Times report. Sharing the technical data will naturally help Australia evaluate the Soryu’s specifications. One of the questions in the Collins-class replacement project has been whether the Australian Navy would be best served by simply purchasing a design off-the-shelf with few modifications, or if it should look to modify and tweak an existing foreign design to better suit the needs of the Australian Navy. With access to Japan’s technical data, the Australian government will be able to better determine the Soryu’s operational suitability.

The Soryu is in many ways the front-runner for the contract, even though Australia is pursuing a competitive bidding process with three countries. At one point, it seemed all but certain that Australia would grant Japan the contract, but domestic political concerns derailed that initiative. Germany’s Type 214 diesel-electric submarine and France’s Scorpène-class offerings are generally regarded as less sophisticated. All three offerings incorporate air independent propulsion technology, which does not exist in the Collins and considerably augments the operational flexibility and endurance of these boats. The Soryu is also the most expensive offering, with a per unit price of around \$540 million (the Type 214 and Scorpène clock in at \$330 and \$450 million respectively).

In Japan, the Soryu bid is an important test of Japan’s ability to compete on the global defense marketplace after it lifted its decades-long self-imposed ban on exporting lethal equipment to other countries. Japan is exploring other defense deals and cooperation arrangements with France, the United Kingdom, India, and Indonesia. For Japanese Prime Minister Shinzo Abe, the Australian contract would represent a major victory in his efforts to galvanize Japan’s defense industry. At the same time, should the Japanese bid succeed, Abe’s critics, primarily in China, will likely cite the deal as an example of Japan’s shift to a more militaristic role in the international system.

After studying the the proposals and considering their varying cost efficiencies, Australian industrial involvement options, and capabilities, the Australian government will announce its choice among the Japanese, German, and French offerings. The determination is expected by the end of the year. Australian Prime Minister Tony Abbott is scheduled to visit Tokyo over the summer.

Sea Trials Of Indian Navy’s Deadliest Sub Going ‘Very Well’
Franz-Stefan Gady, The Diplomat, May 5

Sea trials of India’s first indigenously developed ballistic missile nuclear submarine (SSBN) are going “very well”, Indian Navy chief of staff Admiral RK Dhowan observed last week on the sidelines of a naval aviation conference, according to local media reports.

The 6,000-ton nuclear-powered submarine, INS Arihant, began sea-trials in the Bay of Bengal on December 16, 2014 (the day Pakistan formally surrendered to India in the Indo-Pakistani War of 1971 that led to the creation of Bangladesh). The sea-trials are scheduled to last nine months, followed by extensive weapons testing on board of the vessel lasting at least an equal amount of time. The Arihant’s reactor already went critical in August 2013.

“There are no problems in the INS Arihant project. The trials are underway and going on very well. We are satisfied with the way the project is progressing,” he noted. However, the admiral added that he is “not in a position to give timelines with regard to the completion of INS Arihant trials or what happens thereafter.”

The indigenously designed submarine, based on the Russian Project 971 Akula I-class nuclear powered attack boats, is the lead vessel of the Indian Navy’s future fleet of four (some media reports say five) Arihant-class SSBNs. India already began construction of INS Aridhaman, the second vessel of the Arihant-class, this year.

Conversely, the Indian Navy still does not have a capable ballistic missile with which to arm the INS Arihant. As my

colleague Ankit Panda noted the SSBN will be equipped with 12 K-15 submarine-launched ballistic missiles (SLBMs) with a 700-750 km range – a significant limitation, since the submarine has to move close to enemy shores to launch its missiles, making it vulnerable to detection.

India's Defense Research and Development Organization (DRDO) is also working on the K-4, an intermediate-range nuclear-capable submarine-launched ballistic missile, with a range of up to 3,500 km and is currently undergoing testing.

Additionally, India's nuclear warfare policy is predicated on a No First-Use (NFU) doctrine; consequently, New Delhi needs to field a credible second-strike capability. However, as a recent report by the Carnegie Endowment for International Peace (see: "India and Pakistan Locked in Nuclear Naval Arms Race") points out "India, like Pakistan, is known to keep its nuclear warheads de-mated from the delivery mechanisms. For the INS Arihant to fulfill its operational responsibility, SLBMs mounted with nuclear warheads will have to be deployed on the vessel."

As I reported before (see: "India's Submarine Fleet Faces Further Delays"), India's submarine fleet is in a state of crisis. Readiness rates are below 40 percent and some vessels (especially the SSK U209 class) need urgent upgrades. On paper, the fleet currently consists of 16 boats: ten Russian SSK Kilo (Sindhugosh) Class, four locally built SSK U209 (Shishumar) Class, a leased nuclear-powered SSN from Russia (INS Chakra), and the INS Arihant. However, according to local media reports, the number of active duty subs is now down to 13 diesel-electric submarines and the nuclear-powered INS Chakra.

China's Nuclear Submarine Fleet Vulnerable Due To Idleness: Report Staff, Focus Taiwan, May 6

Taipei, May 6 (CNA) Nuclear-powered submarines in China's navy are vulnerable to precision missile attacks because of the significant amount of time they spend at their bases, according to an article in the May edition of the Chinese-language Kanwa Defense Review (?????).

The report by the Toronto-based publication said the Chinese navy's three main nuclear-powered submarines, the 11,500 tonne Type 094 with ballistic missile launching capabilities, and the 5,500 tonne Type 091 and 7,000 tonne Type 93 spent much of 2014 at their bases.

China's most advanced Type 094 submarines were not ordered to maintain combat readiness and remained largely inactive.

While the Type 093 submarines put in more active duty hours than the Type 091, they were still more idle than the Russian and American submarine fleets, which are known to spend up to one-third of the year on active duty.

Although well protected in subterranean bases in Qingdao and Hainan Island that are carved out of rocks, China's nuclear submarines could be easily nullified by precision missile attacks aimed at collapsing the caves' entrances, rendering them sitting ducks.

The ability to quickly submerge and reach the necessary depth and distance away from base is the best course of action for submarines during war time, the report said.

The report questioned whether it was wise for the Chinese navy to continue basing its submarines in subterranean bases at a time when Russia is phasing the practice out, such as at the underground submarine base in Balaklava in the Crimea Peninsula that was built during the Soviet era.

Mayo: Submarine Life Not All Smooth Sailing Mike Mayo, Sun Sentinel, May 4

To kick off Fleet Week, I went out of my depth — and out of my comfort zone — to get a taste of life aboard a nuclear-powered U.S. Navy submarine.

The USS New Hampshire is cramped and not for the claustrophobic. Imagine going on a packed 24-hour flight from Miami to Mumbai, except you go down 600 feet into water instead of climbing up seven miles into the air. It's a steel tube without windows, a bit longer than a football field but only 32 feet wide. It can deploy as long as 100 days continuously, carrying out clandestine missions around the globe.

"Isolated. Dark. Demanding," said crew member Jason Patrignani, 26, of Naples, when asked to describe submarine life. "Nobody knows what you're doing, and they need the best to do it."

The USS New Hampshire has torpedoes and Tomahawk cruise missiles and a nuclear reactor that can keep it running and powered for 35 years. Every nook and cranny is filled with stuff, and if you're not clumsily banging your head into something hard, then you're probably busy bumping into the very young, very determined-looking crew.

My two most-repeated phrases during an overnight trip from Port Canaveral to Port Everglades: "Ouch" and "Excuse me."

On the bright side, they had steak and crab legs for Sunday supper.

And on the even brighter side, if things go awry, these guys know to adjust on the fly.

That much was apparent after some unplanned hiccups, including a crew member's medical emergency while we were submerged 50 miles offshore Sunday night, and a Monday arrival in Port Everglades that didn't go as designed because of a ramp malfunction. Instead of climbing up gangplank onto the adjoining USS Cole, eight media visitors were helped onto a Broward Sheriff's Office harbor patrol boat, which took us ashore.

I stepped off the USS New Hampshire a little later than scheduled, but with renewed respect for those who serve our country. The all-male crew of 130, based out of Groton, Conn., might look like they're barely old enough to shave, but they are highly-trained, highly-dedicated professionals.

"When a new sailor comes on, we say, 'Welcome to the family,' because we are a family," said Master Chief Jesse Cook, the submarine's third-in-command and head of the enlisted sailors aboard, most of whom range in age from 19-to-25.

The other thing Cook tells them: "Everybody has a plan until they get punched in the face."

It's a quote from boxer Mike Tyson, and it means all the training and preparation in the world still can't prepare the crew for everything they might encounter in a setting that's completely unnatural.

Like the time they were riding out a hurricane submerged in the Atlantic when a storm-churned wave rippled deep beneath the surface and unexpectedly tilted and lifted the sub hundreds of feet.

"Most of the time there's no turbulence down here," Cook said.

Sleeping quarters are tight: Six to a room on triple-decker cots. It's railway sleeper car meets sardine can; there's not enough room to sit up in bed. Toilets are similar to those found in airplanes; you push a button and waste gets suctioned out. Sea water is used for drinking and bathing after desalination. Crew members exercise on stationary bikes and weight sets crammed into hallways or the torpedo storage room.

The sub's goal is to remain undetectable beneath the surface: that means no Internet access or email while submerged. Some crew members play handheld electronic games; the submarine has hundreds of DVDs and a TV set in the cramped dining area.

Sunday's schedule was upended when a crew member had a seizure and passed out. While the onboard medic, Cory Clifton, tended to the stricken man, the commander, Capt. Jason Weed, ordered the submarine to turn back to Port Canaveral and re-surface, where he could communicate with officials ashore.

They weighed options, including a risky nighttime transfer to another boat. When the sailor woke up and stabilized, they decided the best course was to re-submerge and head to Fort Lauderdale. It would be the man's last night on a submarine; the episode meant he could no longer serve on the crew.

At a ceremony Monday before pulling into Port Everglades, Weed told his crew, "We had to make some lightning-quick decisions last night, and the way you guys responded was impressive. I'm proud of you all. Now is the time to focus on some well-deserved liberty."

That's Navy-speak for rest, relaxation and fun.

"Live free!" an officer shouted, starting the USS New Hampshire's motto, same as its namesake state.

"Or die!" the crew replied.

Drones Face Concerns, But More Are On The Way Walter Pincus, Washington Post, May 5

It is time to have a serious discussion about the use of drones – the unmanned weapons directed from far away that the U.S. government calls remotely piloted aircraft.

Concern has heightened over armed drones in the wake of the administration's announcement April 23 of the deaths of two al-Qaeda hostages, American Warren Weinstein and Italian Giovanni Lo Porto. They were killed in January in a CIA drone attack on a terrorist compound in Pakistan. That same strike killed Ahmed Farouq, an al-Qaeda planning leader who was also an American citizen.

CIA intelligence analysts involved in the attack were unaware that the two hostages were at the location. President Obama publicly apologized to the families and took responsibility for the strike that he said "inadvertently took the lives of Warren and Giovanni."

Another CIA drone strike in January against a suspected al-Qaeda facility in Pakistan killed Adam Gadahn, an American who in 2006 was indicted on treason charges. He helped run al-Qaeda's propaganda department, calling himself "Azzam the American" in broadcasts. Again, CIA targeters did not know specifically that Gadahn was present.

Disclosure of these strikes, months after they occurred, drew new criticism of the secrecy surrounding these operations.

In contrast, the Combined Joint Task Force running current military operations in Syria and Iraq announced that over a 24-hour period ended last Friday morning, U.S.-led coalition aircraft carried out 11 air strikes in northern Syria using manned and remotely piloted aircraft (drones) against Islamic State terrorists.

Although the Joint Task Force regularly announces its raids, it provides no specifics as to how many are carried out by manned aircraft and how many are done by armed drones. Asked for a breakdown, a spokesman for the Task Force replied, "For reasons of operational security, we do not discuss detailed information about airstrikes."

On May 3, Reuters reported that a "group monitoring the conflict" said 52 civilians had been killed by those May 1 air

strikes, but the U.S. military could not yet confirm the allegation.

Those 11 Syrian strikes in one day were more than double the five CIA drone strikes in Pakistan this year. If confirmed, the 52 alleged civilian deaths in Syria from those manned and unmanned air attacks represent a far larger number of civilian casualties than the two non-combatants reported as killed this year in CIA drone strikes in Pakistan, according to the New America Foundation Web site.

No concern appears to have been raised about the use of drones by the Joint Task Force in Syria and Iraq, although there have been some issues raised about their being employed in Yemen and Afghanistan.

Is the underlying concern about drones based on the secrecy that surrounds CIA involvement, or is it the idea that armed drones are unmanned – and that no American is directly in harm's way as weapons are dropped on a target?

For some it clearly is the former. The New York Times last week published the names of three senior agency officials directing the drone program although their names had previously considered classified. Has the news media sought out the names of military officers to place responsibility for civilian deaths in any drone attacks directed by the Pentagon?

Jameel Jaffer, deputy legal director at the American Civil Liberties Union, said the January attacks in Pakistan raised doubts about the reliability of the intelligence used to justify drone strikes. Is anyone questioning the intelligence that directs the targeting in Syria or Iraq when civilians are killed or wounded?

There are also some people objecting to the use of unmanned attack aircraft because the pilot or bombardier can be thousands of miles away. Of course, similar questions could be raised about the use of cruise missiles launched from submarines, which have been used to attack al-Qaeda targets, or even manned bombers striking terrorist targets from altitudes of 30,000 feet.

An Associated Press poll released Friday said that 60 percent of Americans support the use of drones to target terrorists, although the number drops to 47 percent if innocent Americans might be killed in the attack. The poll did not include a question that would gauge support if foreign civilian casualties were also possible.

Since the 1950s, the United States has had weapons based in this country designed to hit targets thousands of miles away – nuclear armed intercontinental ballistic missiles – but they are unique because they have not yet been used.

However, now is the time for the Pentagon to prepare the country for more unmanned military weaponry, not just in the air but on land and under the seas. Some are already here, but many more are on the way. And some will potentially select and hit targets independent of any human hand.

More than two years ago, the Defense Department issued a directive entitled “Autonomy in Weapon Systems” that was to apply to the “design, development, acquisition, testing, fielding, and employment of autonomous and semi-autonomous weapon systems, including guided munitions that can independently select and discriminate targets.”

North Korea Conducts Ejection Test Of New Submarine Missile Bill Gertz, The Washington Free Beacon, May 5

North Korea recently conducted a third test of a new submarine-launched ballistic missile (SLBM) that is part of Pyongyang's expanding nuclear arsenal, according to American defense officials.

The underwater ejection test of what the Pentagon is calling the KN-11 missile took place April 22 from an underwater test platform near the North Korean coastal city of Sinpo, located on the southeastern coast of the country about 100 miles from the Demilitarized Zone separating it from South Korea.

Development of the new missile, first disclosed by the Washington Free Beacon, is being carried out at the North's Sinpo South Shipyard.

The ejection test, which was gauged to have been successful by U.S. intelligence agencies, is the third known test of the new submarine missile, indicating the missile program is a high-priority for the communist regime of Kim Jong Un.

Pentagon spokesman Lt. Col. Jeffrey Pool declined to comment, suggesting details of the test are classified.

Current and former national security officials criticized the Obama administration for not doing more to counter the North Korean nuclear threat to the United States.

“This missile, along with the KN-08, happened on Obama's watch and nothing has been done,” said a U.S. intelligence official critical of the Obama administration.

“By utterly ignoring North Korea's growing missile threats, Obama has allowed the threat of rogue state proliferators to fall out of the center of the national political debate,” said John Bolton, former U.S. ambassador to the United Nations. “This is a potential tragedy for the country.”

Retired Air Force Lt. Gen. Thomas McNerney said North Korea's development of the KN-08 and the emerging SLBM present “threats to the continental United States and have been developed under the Obama administration's leadership.”

“Leading from behind is a failed strategy as evidenced by this very dangerous strategic threat to the continental United States of nuclear attack by a very unstable North Korean government,” he said.

Allowing Iran to become a nuclear weapons power in 15 years under the Obama's administration's propose Iran nuclear deal “puts the United States in the most dangerous threat of nuclear attack since the height of the Cold War but from multiple threats—North Korea, China, Russia, and Iran,” McNerney said.

Earlier tests of the KN-11 took place Jan. 23 from a sea-based platform—not a submarine—and another ejection test,

in which a missile ejects from a launch system but does not go into flight, from a land-based static platform in October.

Details of the missile program remain classified. Adm. Cecil D. Haney, commander of the Strategic Command, was the first official to confirm the SLBM program in Senate testimony March 19.

The submarine that will be used for North Korea's underwater-launch missile is not known. Analysts suspect the submarine will be a refurbished Soviet-era Golf II-class submarine that can fire three missiles from its conning tower, or an indigenous missile-firing submarine copied from Russian or Chinese designs. North Korea obtained several Golf-class submarines as scrap metal in the 1990s.

Intelligence analysts said the three tests are an indication of the high priority being placed on developing an underwater nuclear strike capability by Pyongyang.

Joseph DeTrani, former director of the National Counterproliferation Center, a U.S. intelligence agency, said North Korea continues to upgrade its nuclear and missile capabilities in violation of numerous U.N. Security Council resolutions.

"Reported developments with the ICBM-road mobile KN-08 are of immediate concern, as are reports that North Korea is pursuing the development of a SLBM capability," he said.

Former Defense Intelligence Agency official Bruce Bechtol, Jr., said North Korea is developing an SLBM as part of a plan to have missiles capable of reaching the United States and to have missiles that will be difficult to locate for U.S. warning systems.

"With an SLBM they get both," said Bechtol, a North Korea expert. "The submarine can get the platform to launch the missile within range of the continental United States, Alaska, or Hawaii. Thus, once operational, this immediately brings key nodes in the United States within range of what would likely be a nuclear armed missile."

Bechtol said SLBMs provide a key alternative to North Korea's other new strategic system, the land-based and mobile KN-08.

"This means that, once these two systems go operational, it potentially gives North Korea a dual threat for attacking the United States with nuclear or chemical weapons—a threat generated from difficult to detect mobile platforms on both land and sea," he said.

A month after the November test, the United States, South Korea, and Japan signed a formal intelligence-sharing agreement to better inform each state about the SLBM program and other North Korean threats.

The new missile, when deployed, will join a series of strategic nuclear delivery vehicles available to the North Korean military. The Korean People's Army currently has long-range Taepodong missiles and road-mobile KN-08 ICBMs capable of delivering nuclear bombs. North Korea has about 40 IL-28 bombers based at Uiju, near the Chinese border, and at Changjun in the central part of the country.

Disclosure of the SLBM ejection test comes as China recently disclosed that it estimates Pyongyang has an arsenal of up to 20 nuclear warheads.

Siegfried Hecker, a Stanford University professor and former director of the Los Alamos National Laboratory, disclosed the 20-warhead North Korean arsenal after taking part in a meeting with Chinese nuclear specialists in February. Hecker said he is concerned by the figure since it represents a "nuclear arsenal."

The Chinese also believe Pyongyang has the capability of producing quantities of weapons-grade uranium that would allow to double its arsenal by next year.

The North Korean nuclear warhead arsenal, when combined with its missile forces, poses a direct threat to the United States, senior U.S. military officials said last month.

Adm. William Gortney, commander of the U.S. Northern Command, told reporters April 7 that U.S. intelligence agencies have formally assessed that North Korea is capable of making a nuclear warhead small enough to fit on a missile.

North Korea's KN-08 is also a major worry because the mobile missile is difficult to track and can be fired with little warning.

"Our assessment is that they have the ability to put a nuclear weapon on a KN-08 and shoot it at the homeland," Gortney said, adding that the missile has not been flight-tested.

Gortney, who is in charge of defending the United States from missile attacks, added that "we're very concerned about the mobile nature of the KN-08, that we would lose our ability to get the indication that something might occur, and then, of course, the particular nature of the regime that's there."

Little is known about the nature of the KN-11. However, State Department documents disclosed by Wikileaks revealed that North Korea obtained a Russian SS-N-6 submarine-launched ballistic missile several years ago that became the basis for Pyongyang's intermediate-range Musudan missile.

Missile Defense Agency Director Vice Adm. James Syring voiced alarm at the impact of North Korean missile development and sharp budget cuts for American missile defenses.

Syring told the House Armed Services Strategic Forces Subcommittee March 19 that if budget cuts continue "you're starting to jeopardize our future capability ... to defend the homeland with the development and testing that I've seen going on with North Korea very specifically, and the pace in the progress that they're making."

Unless improvements are made in missile defenses, "I'm in serious jeopardy of ... going to the Northern commander and advising him the system is overmatched."

Meanwhile, North Korea announced April 30 that it plans to enhance its nuclear power infrastructure following the announcement that the United States and South Korea had reached a nuclear energy treaty.

"This is a dangerous criminal move which will escalate tension on the Korean Peninsula and spark off nuclear proliferation and a nuclear arms race in Northeast Asia," North Korea's official KCNA news agency said in a statement.

As a result, Pyongyang vowed to “further bolster up its self-defensive nuclear deterrence for defending the dignity of the nation, its sovereignty, and global peace and security,” the statement said.

In a related development, a North Korea expert who studied in Pyongyang said recent reports indicate North Korea is preparing to conduct a satellite launch in the near future.

Alexandre Mansourov, visiting scholar at the John Hopkins School of Advanced International Studies, said a close reading of activities by Kim Jong Un and space-related stories in state-controlled media indicate a launch could be carried out in mid-September or early October.

“The upcoming space launch, in violation of the existing U.N. Security Council resolutions, will demonstrate the Kim regime’s unswerving determination to pursue a robust space program despite international approbation and the missile test ban, will test the limits of Beijing’s patience and Moscow’s rapprochement with Pyongyang, and may compel Washington to expedite the deployment of missile defenses in the region, while straining U.S. relations with its allies ROK and Japan,” Mansourov said.

The Anti-Access Challenge You’re Not Thinking About David Barno and Nora Bensahel, War on the Rocks, May 4

When you hear the phrase “anti-access,” what region of the world do you think of? Most likely it’s the Asia-Pacific. Maybe the Persian Gulf, or if you think a lot about land forces, even Europe. You almost certainly don’t think about the Arctic. But in today’s world, you unquestionably should.

Protecting the global commons and ensuring freedom of navigation around the world has long been a prime U.S. strategic goal. Much of this enduring interest has been driven by the vital role of the commons – air, sea, space, and cyber space – to the global economy and its interconnected web of global trade. For many years, the United States has been emphasizing growing anti-access and area denial threats in Asia, the Gulf, and beyond that may threaten this crucial U.S. interest. Access to the Arctic, which has historically been largely ice-bound and mostly inaccessible, has not traditionally presented major cause for concern. Yet that is now rapidly changing.

For the United States and its allies, the Arctic – often also called the High North by some European countries – today represents a new frontier of both economic opportunity and possible conflict. Two significant trends are converging to make this region a looming anti-access problem as well as an increasingly important U.S. national security issue.

First, climate change is melting the Arctic at an unprecedented rate. Since the 1970s, the Arctic sea ice has decreased by more than 13 percent each decade. Many scientists project that the Arctic will be seasonally ice-free by as soon as 2030. The United States, which started its two-year term as the chair of the Arctic Council on April 24, plans to make addressing the effects of climate change one of its top leadership priorities.

Climate change is creating an entirely new ocean in the north, as previously frozen passageways become navigable for some or all of the year. Voyages along the Northern Sea Route above Russia between the Kara Sea and the Pacific Ocean have been increasing – including the first transit by a supertanker in 2011. Voyages through the Northwest Passage and the Bering Strait have also multiplied in recent years, and these numbers will only continue to accelerate as the ice continues to melt. Commercial interests alone reaffirm the critical need to maintain freedom of navigation through all of the world’s waterways.

Second, Russia is rapidly improving its ability to threaten access to the High North. Since Russia symbolically planted a flag under the North Pole in 2007, it has been heavily investing in a wide range of military capabilities in this area. These include building new bases and airfields, establishing a unified Northern Joint Strategic Command to improve command and control of all Russian military forces in the Arctic, and planning to deploy new radar sites and surface-to-air missile systems.

These military investments would be cause enough for concern, but are even more disturbing given Russian aggression in Ukraine and its increasingly assertive behavior in the Arctic. To take just a few examples, Norway intercepted 74 Russian warplanes conducting air patrols on its coast in 2014 – 27 percent more than in 2013 and up from a total of 11 intercepts 10 years ago. In March, Russia responded to a long-planned Norwegian military exercise of 5,000 personnel with a snap exercise (one that had not been previously announced) of 45,000 personnel and some forward deployed nuclear forces. Russian submarines have also been suspected of operating off the coast of Sweden, and last week, Finland dropped depth charges against a suspected foreign submarine within its territorial waters.

Taken together, these two trends pose a substantial and to date largely unnoticed anti-access challenge for the United States and its allies. As the number of navigable waterways is increasing, so too is Russia’s ability to control access to the strategically important region to its north and west.

The United States and its allies are strikingly unprepared to address this growing anti-access challenge. The U.S. government has issued a flurry of Arctic strategies in recent years – including the 2013 National Strategy for the Arctic Region, the 2013 Department of Defense Arctic Strategy, and a January 2015 executive order on coordinating U.S. efforts in the Arctic. But these strategies are not resourced, and they do not go far enough. They assert the importance of access in the Arctic, but they do not address what the United States needs to do in order to maintain and ensure that access. Four specific actions are needed.

First, the U.S. must rapidly develop a credible ice-breaking capability. The United States owns three polar icebreak-

ers, but only two are heavy enough to break through winter ice, and one of those is inoperable. The service life of the remaining heavy icebreaker will end in the 2020s, and no funds have been allocated for a replacement. Russia, by comparison, owns more than three dozen icebreakers, including four heavy ones. And despite the continued melting of Arctic ice, deploying capable icebreakers remains essential in order to assure year-round access.

The U.S. Coast Guard, which maintains the U.S. icebreaker fleet, has estimated that it needs three medium and three heavy icebreakers in order to meet its requirements – but those requirements could increase as geopolitical tensions increase and the Arctic continues to open. The cost of building a new heavy icebreaker is somewhere around \$1 billion. That means for a fraction of the cost of a single new destroyer, the United States could ensure year-round access to all parts of the frozen north. Yet President Obama's FY16 budget requests only \$4 million for this purpose, and Congress remains unlikely to allocate any additional funds. This effectively denies the United States access for its surface vessels to vast portions of the Arctic during much of the year, a major operational vulnerability – and one that effectively cedes much of the region to Russia.

Second, the United States needs to work with its allies to improve maritime domain awareness in the Arctic. Expanded satellite surveillance, increased submarine and aircraft patrols, and freedom of navigation surface and air sorties can serve to provide critical information on emerging military activities as well as vital meteorological data needed to understand the polar icecap and surrounding waters.

Third, the United States and its NATO allies must embark on a transparent yet substantive peacetime presence and military exercise program to reestablish a regular presence in the Arctic. The United States and its allies should demonstrate their ability to operate in the forbidding climate of the Arctic, just as the Russian military is doing, in order to reinforce standards of international access and freedom of the seas. Such an exercise program would not only help deter Russian adventurism, but would also help maintain a wider international presence while building better working relationships among Western stakeholders.

Fourth, the United States should continue pushing NATO to take on a greater role in Arctic security issues, particularly in the European High North. As we've argued elsewhere, the Arctic is NATO's newest front. Many of the previous steps include working with U.S. allies on a bilateral or multilateral basis, but the alliance as an institution needs to become more involved in the Arctic as well. NATO should increase its regional maritime security efforts, and the member states should consider making NATO the lead organization for Arctic security. Canada has long opposed such a NATO role, due to its concerns about sovereignty and precedents that could affect the Northwest Passage. Yet NATO must find a way to assuage Canadian concerns while also addressing the growing threats to the alliance's northern and eastern members.

Some U.S. allies are concerned that steps like those identified above will militarize the region or unnecessarily provoke Russia into even more aggressive actions. But Russia has already done so in many ways – and the reality of growing Russian military capabilities combined with Russia's assertive behavior means that the United States and its allies need to hedge against this potential threat. Russian aggression in Eastern Europe is unlikely to remain isolated to that Russian border, and the Arctic provides a highly tempting and largely unprotected frontier for further Russian adventurism. The United States and its allies should not intentionally provoke Russia in the Arctic but must do what is required – in a fully open manner – to protect open access to this key region.

The Arctic poses a significant anti-access challenge to the United States that deserves serious attention. A new and more comprehensive approach is needed, as are the resources needed to maintain continuous and open access to the Arctic. Military capabilities need improvement, and military presence increased by expanding regular patrols and exercises. These activities can hedge against the potential for greater Russian adventurism, while remaining below the threshold of overt provocation. Absent these steps, the High North is at risk of falling largely under Russian influence, if not absolute control. Without action now, the United States and its friends risk losing access to this strategically important region for the 21st century.

