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The Silent Sentinel JULY 2008



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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 towards greater accomplishment and patriotism to the United States of America



The Silent Sentinel July 2008

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Do not Miss Movement!

All submittals for the next Silent Sentinel must be received by the date indicated on page four. Entries received after the due date will be printed in the following month's issue, space permitting. Acceptable format for text files are TXT and DOC (not DOC1). Questions? Call me at 619-980-0846. Mike, Editor

Treasurer David Ball davidball@cox.net 619-225-0304

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.

NO
USSVI Base Commander
c/o VFW Post 3787
4370 Twain Ave.
San Diego, CA 92120-3404

Commander's Corner July 2008

Hope everyone is doing fine. Keep in mind that we are having a breakfast on the 29th of this month. Volunteers are

That's all for now shipmates. Hope everyone and their families are in good health and good spirits.

Base Commander Bob Bissonnette

Upcoming Events: 29 June – Base Breakfast 8am – noon at the VFW 4 July – Julian 4TH of July Parade / 9am meet SEE OR CALL MIKE HYMAN, 619-980-0846, FOR ALL YOUR SUBMARINE STORES NEEDS. ASK ABOUT THE SPECIAL OF THE MONTH. SHIPPING IS AVAILABLE FOR "ANY' SIZE ORDER. *Mike*

ALL INPUTS FOR THE AUGSUST 2008 SILENT SENTINEL MUST BE IN MY HAND BY THE 22ND OF JULY! IT HAS TO BE RECEIVED BY ME BY THIS DATE. I CANNOT ACCEPT SUBMITTALS FOR THE AUGUST ISSUE ANY LATER, SO GET THEM IN EARLY. MIKE

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

July Meeting

Our monthly meetings are held on the second Tuesday of the month at VFW Post 3787, 4370 Twain Ave., San Diego. Our next one is on July 8th. The post is located one half block West of Mission Gorge Road, just north of I-8. The meeting starts promptly at 1900. The "E" Board meets one hour earlier (at 1800).

HAVE FUN AND HELP SUBVETS SAN DIEGO AT THE SAME TIME!

HELP COLLATE THE SILENT SENTINEL IN ORDER TO KEEP COSTS DOWN.

THE AUGUST 2008 EDITION SILENT SENTINEL COLLATE PARTY WILL BE HELD ON August 2^{nd} , 0900, AT THE TWAIN AVENUE VFW.

BINNACLE LIST

Mike Hyman C J Glassford (now recuperating at home and doing much better) Larry Freske Al Strunk (now recuperating at home and doing much better)

Submitted by Mike Hyman

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JUNE

HERRING (SS 233) - 84 Men on Board: Sunk, on 1 June 1944, by Japanese Army Shore Battery. Off Matsuwa Island, in the Kuriles : "ALL HANDS LOST "

S – 28 (SS 133) - 50 Men on Board: Sunk, on 4 June 1944, During ASW Exercises Off the Hawaiian Islands : "ALL HANDS LOST "

R – 12 (SS 89) - 42 Men on Board: Foundered, on 12 June 1943, After Battery Flooded, While off Key West, Florida : "ALL HANDS LOST "

GOLET (SS 361) - 82 Men on Board:

Probably Sunk, on 14 June 1944, by Japanese Guard Boat, Auxiliary Submarine Chaser, and Naval Aircraft Attack, Off Northern Honshu, Japan : ALL HANDS LOST "

SARGO (SSN 583) - 95 Men on Board:

Oxygen Feeder Line Fire and Explosion, on 14 June 1960, in After Torpedo Room. Blaze Extinguished by Submerging in Pearl Harbor, with Compartment Sealed, and After Torpedo Room Hatch Open : "1 MAN LOST "

BONEFISH (SS 223)-85 Men on Board:Sunk, on 18 June 1945, by Combined Efforts of DestroyerEscort, and 4 Coast DefenseVessels, Off the SoutheasternCoast of Honshu, Japan :"ALL HANDS LOST "

S-27 (SS132) - 50 Men on Board: Grounded on Shoals, on 19 June 1942, off Amchitka Island. Crew abandoned Ship, Swam to the Island and were rescued by PBY's from Dutch Harbor, Six days later: " NO LOSS OF LIFE "

O – 9 (SS 70) - 33 Men on Board: Foundered, on 20 June 1941, During Deep Submergence Tests, Off the Coast of New London Connecticut : "ALL HANDS LOST "



Submitted by C J Glassford

Opinion: Does not necessarily reflect the position of USSVI

Sanctus Simplicitas

by Michael Hyman

I had a number of people tell me over the years that they like my view on things. I had even one fellow tell me that were I running for President of the United States, he'd vote for me (there's no accounting for taste; still, I was flattered by the comment). So it occurred to me to ask the question, "What kind of speech would I give if I were a presidential contender?"

Before anything, I'd have to take care of a few of the preliminaries.

My campaign slogan would be something catchy. I like the concept of KISS (keep it simple stupid) but it is rather difficult to run on a platform so boldly named. People might get the wrong impression. So after some thought, I figured I'd do what the Queen of England did. She described her bad year (taxes, a fire, and Princess Di) using Latin. Instead of saying that her problems really sucked big time, she referred to her then recent scenario as Annus Horribilis. Sounds really fancy, doesn't it? So in the same spirit, I would call my campaign slogan *Sanctus Simplicitas* (Holy Simplicity). It might even help me win some Catholic votes.

Funding would come from public and private sources. I do not have much trust in persons who are not willing to accept honestly acquired funds—except maybe the Dali Lama, but he isn't running.

Party affiliation would be *none* (keep in mind this is my fantasy). They all have too much baggage. Even the Independents are not so independent.

And my political experience would be based on my many years of working as an electronic engineer and manager for SAIC, General Atomics, Westinghouse Plant Apparatus Division, and Navsea, in addition to the time I spent in the US Navy Submarine Service. If one doesn't know the ins and outs of the political system after having worked at these places for so many years, a good hearing checkup and eye exam would be in order.

So here I am, giving the commencement speech at Columbia University. There are a few hecklers but all in all, the crowd is rather attentive.

This past weekend, the Science Channel had a space marathon—a series entitled, *When we left Earth: The NASA Missions*. While watching, it occurred to me that the history of NASA is a metaphor describing what goes right when correct thinking is applied to challenging problems. The opposite is also true. And the space program has learned this the hard way.

The impressive thing in all of this is that America did it alone and was not dependent on foreign influences. Sure, one can argue that German rocket scientists were instrumental in getting our early space program off the ground, but at the same time it must be remembered that Werner Von Braun and his associates were spoils of war; and the President of the United States did not have to kiss their hands in order to increase production (working in a well furnished laboratory and designing rockets was clearly more preferable for these former SS officers than swinging from the end of a noose).

Today, the problems facing the United States are many. None are, however, without solution. As with the space program, the matter at hand is to define the problem in clear language and to use all the available resources to solve it.

Let me take a few for instances.

Columnist Dennis Pipes has wisely observed that one of the problems we now face is identifying our enemy. He states that terms such as the "global war on terror,' the 'long war,' the 'global struggle against violent extremism,' or even the 'global struggle for security and progress" defines our war goals rather than our enemy. He goes on to say that we must be brave enough identify our enemy as "radical Islam." He goes on to say that "[i]n the final analysis, Islamism presents two main challenges to Westerners: To speak frankly and to aim for victory. Neither comes naturally to the modern person, who tends to prefer political correctness and conflict resolution, or even appeasement. But once these hurdles are overcome, the Islamist enemy's objective weakness in terms of arsenal, economy, and resources means it can readily be defeated."

Applause

If elected, I will ask my Pipes to join my cabinet.

More Applause

Our founding fathers were rather strong in their belief of "no entangling alliances." Nonetheless, we are facing today a dependence on foreign energy sources, which, if allowed to continue, will bring our great nation to its knees. Considering the fact that the United States has more oil than all the nations of the Middle East combined, I see no reason to not take advantage of this great national resource. Moreover, only twenty percent of the energy produced in the United States is from nuclear generation. My goal, if elected, is to raise this number to fifty percent by the end of my first term. I hope that our senators and representatives will see the necessity for such bold steps, but let me say this. If they do not, I will invoke the War Powers Act (as did Abraham Lincoln, Woodrow Wilson, Franklin Delano Roosevelt, and George Bush) and place the necessary tools in place to get the job done.

Applause and Cheers

Ladies and Gentlemen, during one of this nation's greatest challenges, the Second World-War, American scientists, engineers, and technicians were able to take an idea from theory to reality. The design and production of the Atomic Bomb was instrumental in preventing over 500,000 American casualties and in bringing a quick end to the war in the Pacific. It is my intention to put the same effort into our current challenges as our fathers and mothers did back then.

By the way, my father-may he rest in peace-used to say that were it not for the bomb, I probably wouldn't be here!

Crowd Laughs

Therefore, my goal is to establish an energy development program on the same level as the Manhattan Project from the Second World-War era. As I indicated earlier, the Atomic Bomb saved countless American lives. I should remind everyone that the Manhattan Project was run secretly; and yet, within three short years, a working device was had. American know-how and determination, when put to the test, always come through!

Applause

Our economic situation today is driven by a world economy. In many areas, this has not been a benefit to America or to the American worker. American industry has led the world for over one hundred years. It is fading quickly away from this coveted position. Various forces and entities would prefer to see us on equal footing with Third-World nations, to make

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the playing field level, so to speak. I intend to place America back in the lead. To do this I will provide a tax structure which is beneficial to keeping American jobs in America as well other statutes to encourage American businesses to manufacture their products here.

All told, my administration will not look favorably on corporations who prefer to export American jobs and wealth to foreign lands.

The once great American steel industry has for the most part disappeared from our shores, with China, Japan, and Korea enjoying the benefit. Silicon Foundry's for the manufacture of integrated circuit wafers have but flown from our borders to other lands. Our automobile industry is but a shadow of itself. We know the reasons why these things occurred. True, we cannot change the past but we can repair it and ensure that it does not happen again.

As I have indicated, I will ensure a friendly environment between business and government to shore-up the economic basis of our great nation. This does not mean that we will ignore the environment. None-the-less, the policies necessary to promote the survival of our country will not be dictated by special interests, environmentalist or otherwise.

To help keep American jobs in America, university tuition incentives for engineering and scientific disciplines, so critical to preserving America's industrial lead, will be readily available for those American students up to the challenge. Additional Math and Science programs will be funded for elementary and secondary schools to entice potential applicants. Too many scientific disciplines have faded away from American shores. I intend to revive these areas so vital to our nation's future.

Our veterans are of special concern to me. Our men and women who have served in uniform have had to continuously fight for promises made to them by various Administrations and Congresses. Education benefits have dwindled to far below the actual cost of an education, Veteran home loan guarantees are so unrealistic, that within my home base of San Diego, the nearest home to be had is at least eighty miles from the city itself. Disabled veterans have to fight for years to receive the just compensation for service related disabilities. All of this will change upon my acceptance of office.

A national health plan has been discussed for all Americans without health care; however, it is my firm belief that socialized medicine does not work. One only needs look to Canada or to Great Britain to see the results of systems such as these. Nonetheless, the sick will always be among us—regardless of advances in the medical field—and we must not ignore persons too indigent to obtain basic health care. Still, we cannot obtain a viable healthcare option when our borders are being flooded with undocumented aliens, burdening our health care system beyond its capacity. Consequently, it is my plan to remove this external drain on our system. Our borders will be fully secured to prevent unauthorized entry. States and Cities will be required to establish and enforce aggressive plans to detain all undocumented aliens residing within our borders. Federal funding will be withheld from those who do not fully participate. In addition, the Immigration and Naturalization Service (INS) as well as the Border Patrol will be enlarged to handle the added capacity of this endeavor.

History has shown us that a clear purpose, one which is based on reason and logic, and the determination to fulfill it, will produce positive results. This is not to say that the path will always be easy. It usually is not. Still, our nation's recent past has showed us what can be achieved when our goals are correctly set.

A wise man once said, "If I am not for myself, then who am I? And if not now, then when?

I thank you for giving me the opportunity to address you this afternoon.

Rousing applause and cheers are given. The university president shakes my hand.

Life is good in fantasyland!

Minutes of June 2008 Meeting

Bob Bissonnette's computer took a hit and it was not possible to get the minutes to me by print time. They will be published in the next edition of the Sentinel.

... more high tech woes,

While preparing the Sentinel, I apparently deleted the revised Treasurer's Report for May 2008. I will print this also in the next issue.

Membership

New Members: Welcome aboard to: Roy Latham, Qual Boat: Pintado-1987; Richard Olson, Qual Boat: Pomodon-1966; & Roibert Weber Jr., Qual Boat: Guitarro-1987.

Status: As of this date, San Diego base can muster a working party of 34 workers, and 300 supervisors (Just an estimated breakdown of our 334 members). Unrelated statistic: Thirty of our members qualified before 1946, and 42 have donned dolphins since 1972.

News: In April, at a combined USSVI & SVWWII meeting here in San Diego, a motion was approved to offer WWII SubVets Life Membership in USSVI for \$20.00. San Diego Base will honor this commitment, rectifying a situation wherein at least three of our heroes who qualified during (or before) WWII, but were ineligible for Holland Club induction.

Database Errors: (1) *No Qualification dates* for the following submariners: Chilcote, Harer, and C. Hill (2) James Medland (El Cajon?)?) is Life Member but with *incorrect address* in the database—so no Silent Sentinel. Anybody know how to find him?

Note: BZ to Tom Warner for recruiting and welcoming new members.

Winter: Fewer Subs For Now

Navy Secretary Says Budget Prohibits Boosting Production To Two Per Year By 2010 The Day *By Jennifer Grogan, June 18, 2008*

Newport, R.I. - The Secretary of the Navy said Tuesday that the service needs to "get in the habit of appetite suppression," balancing what is affordable versus what is desirable when purchasing ships.

"We cannot afford to build or operate the number of ships we would ideally like to have," Secretary Donald C. Winter said at the U.S. Naval War College.

Winter spoke at the college's 59th annual Current Strategy Forum, a two-day event intended to encourage the exchange of ideas among leaders in business, government and the military.

The secretary said after his speech that he does not support increasing production of submarines from one a year to two before 2011. There is an effort in the U.S. House of Representatives to advance the date to 2010, with a group of Democrats, including Rep. Joe Courtney, D-2nd District, currently seeking the support of ranking members of the defense subcommittee of the Appropriations Committee.

Winter said stepping up production is not feasible and not appropriate because the service has to address a range of threats.

"It is unrealistic to expect the Navy budget to increase significantly at the present time," he said. "With increasing pressures on the federal budget elsewhere and with political changes that may result in changes in investment strategies for federal dollars, it is likely that the Navy budget will be steady to declining in future years."

When asked by an audience member about the upcoming election and its effect on planning, Winter jokingly replied that he had a 10-CD monologue on the topic that would be on sale Jan. 21, the day after the inauguration.

Winter said Navy leadership is allocating as much money to shipbuilding as possible, given the other needs of the Navy and rising costs for personnel, fuel and wartime operations. The Navy cannot get to its goal of having at least 313 ships in the fleet when the average cost per ship is over \$3 billion, he said.

"There is no silver-bullet solution to this financial problem," Winter said. "We must figure out how to build a more cost-effective fleet and build a fleet that is less costly to operate."

Virginia-class submarines, built under a teaming arrangement by Electric Boat in Groton and Northrop Grumman Newport News in Virginia, cost just over \$2 billion to build.

Winter said he favored further diversifying the fleet and implementing cost-saving measures on submarines before building more.

Adm. Gary Roughead, chief of naval operations, speaking later in the day at the war college, said he is "comfortable" with waiting till 2011 to increase production to two submarines a year.

Asked whether he was concerned about the effect on the gap between workload and work force, Roughead said, "I would leave it to the corporation to talk more specifically about ... how they're going to manage that work force, but I believe, at least from my tours around, that if we can get to two in '11, as we've outlined, I think we can do OK.

"Both the secretary and I are extremely mindful of that industrial base and the fact that we have in this country a unique and premier submarine design-and-build capability. It's a national asset. It's a national treasure and we have got to maintain it."

The secretary noted that littoral combat ships, even at current cost projections, are still significantly less expensive than other ships. He called these ships "an affordable response to our presence requirements."

The Navy is also studying whether to expand the use of nuclear power in the fleet at a time of skyrocketing fuel costs.

The challenges of designing and building a nuclear-powered, next-generation Navy cruiser, and possibly larger amphibious ships, are the significant upfront costs and competition with commercial industry for nuclear engineers, Winter said. Working through these issues, he said, is not a "trivial task."

"We're getting into the realm where, with the price of oil, the value of nuclear power will become more evident over the course of time," Winter said. "But I am not sure how to transition from where we are to where we

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would like to be, given financial constraints. That is something that will have to be worked out by future administrations and future Congresses."

Winter did say there must be investment in the fleet now because of the long lead times to build ships.

"Weakness invites aggressors to take advantage and exploit your weakness," he said. "So we must be strong, and that means building up our Navy and Marine Corps."

Tiny Reef Fish Inspire Submarine Designers

Thaindian.Com, June 18, 2008

The wing-like fins of tiny reef fish allow them to cruise at the human equivalent of 60 km per hour and also negotiate strong currents with ease. Their prowess has now drawn the attention of the US Navy, whose submarine designers are studying what makes these fish so fast.

The researchers found the reef fish could move at up to 10 body lengths per second, while Olympic champions reach speeds of just 1.3 body lengths per second, and then only for the brief 22 seconds of the 50-metre freestyle sprint.

"Some species of parrotfish, wrasse and surgeonfish have developed wing-like fins which they move in a flapping motion, just like a bird," said Chris Fulton of the Australian National University who led a study of the reef fish.

"This allows them to generate high swimming speeds with relatively little energy so they can move easily around their turbulent, wave-swept habitats.

"Reef fish just 10 cm long can cruise all day at an average speed of 3.6 km per hour, which is the equivalent of a typical person swimming at more than 60 km per hour."

Understandably, the design of the fins has drawn the attention of underwater submersible designers and the US Office of Naval Research.

"While we are seeing rapid advancements in submersible design ... we are yet to match the speed and efficiency achieved by these wing-finned coral reef fishes," Fulton said. "We still have much to learn from over 50 million years of reef fish evolution.

"We were surveying fish populations on the Great Barrier Reef in 2000 and realised some of them had these unusual, wing-like fins. When we looked on coral reefs in Tahiti and the Caribbean, we found more 'winged' fishes.

"We discovered that the fastest reef fishes have tapered fins, which they tend to flap in a figure-of-eight sweep that creates thrust on every stroke," Fulton explained.

"Some of these fish play a crucial role in maintaining the health of our reefs by eating the fleshy algae that would otherwise overgrow and smother live corals," Fulton said.

Nautilus Baby Returns To Sub A Bride

By Jennifer Grogan, The Day, June 25, 2008

Groton – Jennifer Papineau had not been on top of the USS Nautilus since she was 5 weeks old, when she was baptized there.

"My heart is racing," she said, standing inside the U.S. Navy Submarine Force Museum Tuesday.

Papineau, whose father was the ship's engineer at the time, was the first – and only – baby baptized on the Nautilus, the Navy's first nuclear-powered submarine and the first vessel to cross the North Pole.

The crew took the ship's brass bell off the sail and sealed the hole on top with heavy grease for the religious ceremony. Then they flipped it over and added holy water.

Papineau was bundled in blankets to protect her from the snow, held over the bell and baptized on the Nautilus at the Naval Submarine Base on Dec. 3, 1978. Her full name, Jennifer Louise Papineau, and the date, were engraved on the bell.

Papineau, now 29 and living in Illinois, wanted to see the bell during her honeymoon trip to the East Coast with her husband, Robert Kehrer. She contacted the museum and arranged a tour for Tuesday.

Braving an approaching lightning storm, Papineau and Kehrer rushed outside and onto the Nautilus, where the bell hung on the sail.

"Oh my God," Papineau said, as she saw her name.

"It's in good form to ring you on," Nautilus command Chief Matthew Acevedo said, ringing the bell. "That would be Ms. Papineau arriving."

"Now it's real," Papineau said. "Before it was always photos or stories. ... It's very emotional. I'm having a hard time with words now, but I'm proud and I'm honored."

Papineau's father, Paul, retired from the Navy in 1994 as a commander after 31 years of service. He was the last engineer on the Nautilus, which was decommissioned in 1980. His wife, Carol, also served in the Navy and retired as a lieutenant commander.

Paul Papineau said in a telephone interview he got the idea for the baptism from his commanding officer, and called it a "gift for his daughter" that brings a tear to his eye whenever he thinks about it.

"That ship was so many things, and when you're aboard it, you become part of the ship, and it becomes part of you," he said.

After it stopped raining, Papineau and Kehrer toured the inside of the Nautilus with museum curator Steve Finnigan. Papineau stood on the brow between the submarine and the pier on her way out, looking back at the bell.

"We're going to have kids, is there any chance ...?" she asked Finnigan.

Probably not, Finnigan replied, saying he was surprised the Navy allowed her baptism.

So Papineau and Kehrer continued on their honeymoon, safe in the knowledge that she would forever be the only baby baptized on the Nautilus.

"I will never forget this, never, never," she said.

Russian General Fires Arctic Warning

By Randy Boswell, Agence France-Presse, June 24, 2008

A tough-talking Russian general is reheating the rhetoric of Arctic politics ahead of a large-scale military training exercise in Siberia, commenting in the country's official army newspaper that "wars these days are won and lost well before they are launched."

Lt.-Gen. Vladimir Shamanov, head of the Russian military's combat training directorate, told the Krasnaya Zvezda (Red Star) that Russia moved to bolster its presence in the Arctic after a negative international response - which included criticism from Canada - to last summer's controversial Russian flag-planting on the North Pole sea floor.

"After the reaction of a certain number of heads of state to Russia's territorial claims to the continental plateau of the Arctic, the training division has immediately set out (training) plans for troops that could be engaged in Arctic combat missions," Shamanov was quoted saying in Tuesday's edition of the military daily.

In late May, ministers from the five nations with Arctic Ocean coasts – including Canadian Natural Resources Minister Gary Lunn and Russian foreign minister Sergei Lavrov – promised to tone down the rhetoric surrounding the countries' competing undersea territorial claims in the potentially oil-rich Arctic Ocean.

The five countries – Canada, Russia, Norway, Denmark (Greenland) and the U.S. (Alaska) – are each compiling data for possible extensions to their Arctic continental shelves under terms of the UN Convention on the Law of the Sea.

But just days after the five-nation Arctic summit in Greenland, Shamanov announced plans to increase the "operational radius" of Russia's northern submarine fleet and reinforce the Russian army's combat readiness along the Arctic coast.

Rob Huebert, a University of Calgary specialist in polar politics, said Shamanov isn't just "blowing smoke" and appears to be sending a message to Russia's northern neighbours about Moscow's determination to strengthen its military presence in the Arctic and secure its position as the region's prime power.

"This is, unfortunately, getting serious in a long-term scenario," Huebert told Canwest News Service.

"The Russians are making a really concerted effort to let us know they're reinvigorating their northern capabilities." But Michael Byers, a University of British Columbia specialist in international law and Arctic politics, said Shamanov's choice of words doesn't appear to reflect Russia's recent co-operative approach to resolving Arctic issues through multilateral meetings and by "acting within the rules." Shamanov, he said, is like those in Canada who seize "every opportunity to push for greater military spending without regard for the diplomatic or geopolitical consequences."

Huebert, though, rejects the widely held view that last year's North Pole dive by a Russian submersible was a mere scientific "stunt."

He says, in fact, that Russia was pointedly warning other Arctic states that their potential claims over seabed territory - likely to overlap in the central Arctic Ocean - should go no further than the North Pole.

"Those overlaps are potentially going to cause a degree of friction," said Huebert. "The million-dollar question is: What degree of friction?"

While Prime Minister Stephen Harper has announced several investments aimed at bolstering Canada's own capabilities in the Arctic – including a planned fleet of patrol vessels and a Resolute, Nunavut-based northern military training centre – Huebert said there's "no comparison" between Canada's modest defence presence in the Far North and Russia's superpower-scale Arctic military capacity.

CNO Visits Israel for Counterpart Visit

By Mass Communication Specialist 2nd Class (SW) Rebekah Blowers, Navy News, June 23, 2008



TELAVIV, Israel (NNS) — Chief of Naval Operations (CNO), Adm. Gary Roughead is visiting Israel from June 21-24 at the invitation of Israel Navy Commander, Vice Adm. Eli Marum, to strengthen and further develop global maritime partnerships and increase maritime security.

CNO toured Haifa and Ashdod Naval Bases where he got underway on INS Lahav, an Eilat-class corvette; a Shaldag-class fast patrol craft; went aboard the Israeli Dolphin-class submarine, INS Tukuma; and met with Israel Navy and Ministry of Defense officials. Roughead said closer ties and cooperation are mutually beneficial to both navies.

"This is my first visit to Israel, and I've found it to be extremely worthwhile, productive and enjoyable both professionally and personally," Roughead said. "This is an important visit because of the close relationship between our nations and our navies."

CNO stressed the significance of Israel as an important partner to maintaining regional maritime security and achieving key objectives of the cooperative maritime strategy.

"It is important for us to discuss the views we have on maintaining security and safety of our world's oceans and the sea lanes of communication that are important to the prosperity of our countries," said Roughead.

Although this is Roughead's first visit to Israel since becoming Chief of Naval Operations in September 2007, this is the third occasion in which he's had substantive meetings with Marum. Roughead said he looks forward to future visits with the Israel Navy, as well as other maritime partners throughout the world. Roughead believes that many countries in the region, including Israel, share common interests in combating piracy, promoting stability and securing the maritime domain.

The Energy Crisis' Nuclear Answer

By Frank L. Bowman, The New York Post, June 24, 2008

MEETING future US electricity demand while protecting the environment is going to require greater use of nuclear energy. Members of both parties have embraced that simple idea; Sen. John McCain's new proposal that the United States build 45 nuclear-power plants by 2030 is just the latest endorsement.

As policymakers work to enhance our energy security and address climate change, they confront two key facts:

* There is a growing consensus that any credible program to reduce greenhouse-gas emissions must rely on a variety of technologies and approaches. And nuclear energy, which produces one-fifth of US electricity at 104 commercial reactors, is indispensable in that effort.

A wide and growing body of mainstream research and analysis supports that conclusion. Two weeks ago, the US National Academy of Sciences and 12 similar organizations from the other G8 nations, China, India, Mexico, South Africa and Brazil said the transition to a low-carbon society required "investing strongly" in nuclear power and other low-carbon energy sources.

* The electric-power sector will require major investment to face the challenge of developing the low- and zerocarbon power projects while meeting America's fast-growing electricity demand.

Federal legislation must include targets and timetables for carbon reduction - but also help provide industry the technology and means to achieve those targets and timetables. That will require financial support that is more aggressive and ambitious than anything now in place.

Nuclear-plant construction must accelerate in a carbon-constrained world. Some plans to speed it up are even more aggressive than McCain's proposal.

The US electric industry is moving forward as quickly as we can to license, finance and build the next generation of nuclear-power plants. Seventeen companies or groups of companies are preparing license applications for as many as 31 new reactors. Nine construction and operating permits are under review by the US Nuclear Regulatory Commission for 15 new reactors. Four to eight new nuclear plants are on track to be in operation by 2016-17.

If those first plants meet construction schedules and cost estimates, nuclear-plant construction should then accelerate. Given adequate financing, about 20 new nuclear plants could be on line by 2020.

But building one of these plants is a major financial challenge for many electric companies – the cost is likely at least \$6 billion to \$7 billion. Few US electric-power companies can finance such a project on their balance sheets – particularly at a time when they are investing more than \$1 trillion in other power projects, transmission infrastructure and environmental controls.

So these first projects need financing support - federal loan guarantees and assurances from state government that the company will be able to recover its investment.

The modest loan guarantee program authorized by the 2005 Energy Policy Act was a step in the right direction. Properly administered, the program would be cost neutral to taxpayers and make electricity cheaper for consumers.

But loan guarantees alone won't do enough to rebuild our critical electric-power infrastructure.

Rather, our nation will need something similar to the Clean Energy Bank concept being considered by some in Congress. This would be a government corporation providing loan guarantees and other forms of financial support to ensure capital for deploying clean-electricity technology.

The high cost of energy and rising fuel prices have already compromised the competitive position of American industry. Building new nuclear plants is vital to transforming the US energy landscape to help meet a 25 percent increase in electricity demand by 2030 and reduce America's reliance on foreign supplies of energy.

Adm. Frank L. Bowman (ret.) is president and CEO of the Nuclear Energy Institute. He was director of the Naval Nuclear Propulsion Program for eight of his 38 years in the US Navy.

San Diego Sub Vets Propose 52 Boat Memorial

The motto of the U.S. Submarine Veterans of WW II is to: *"Perpetuate the memory of those shipmates who gave their lives in submarine warfare."*

In 1995 the San Diego Chapter voted unanimously to create a memorial to the 52 U.S. Navy submarines and the more than 3500 American submariners lost in World War II, and work began with the San Diego Park & Recreation Dept. to find a suitable location. The city suggested the new park that was going to be created on the grounds of the former Naval Training Center San Diego, which had been designated for closure by the Base Realignment and Closure Commission (BRACC).

All military operations ceased at the base in 1997 and the land was reconveyed to the City of San Diego.

The City of San Diego developed a master plan for the use of the 328 acre site that includes the restoration and preservation of many of the historic buildings. It also includes a new 40 acre City Park on the waterfront that will be one of the crown jewels of the City park system.

Already being referred to as "Balboa by the Bay," in reference to San Diego's world famous Balboa Park, the new park at Liberty Station will have athletic facilities including a swimming pool complex, picnic areas, hiking trails, a nature preserve, and a central plaza the size of three football fields designed around the 52 Boats Memorial.

The design of the memorial includes a planting of 52 American Liberty Elm trees, one for each of the lost boats. The trees will line broad sidewalks that flank the plaza on two sides leading down to the waters edge. In front of each tree will be a black granite monument laser etched with the name and picture of one of the lost boats, the circumstances of the boat's loss and the names of all the men who were lost with the boat.

A provision will be made to fly a flag at each monument on the anniversary of the boat's loss. On national holidays and other special events, all 52 flags will be flown. Other monuments and trees will honor submariners lost in World War II on boats that survived the war, and submarines lost at times other than World War II.

Protesters Dwindle To Just Two At The Latest Submarine Christening

The Day, June 22, 2008

Groton – For the first time in 21 years, Chris Allen-Doucot stayed until the end of a submarine christening at Electric Boat.

A protester and member of the faith-based Hartford Catholic Worker, he said, "I'm usually a guest sitting in an air-conditioned cell" at the police department.

On Saturday, two members of the group from northern Hartford staged a quiet protest outside the shipyard's main gate while a ceremony was held inside to christen the New Hampshire, a Virginia-class fast-attack submarine.

Allen-Doucot, 40, and Brian Kavanaugh, 65, walked from Fort Griswold to Electric Boat with signs about 7 feet tall, then stood in a shaded area behind a barricade.

They said the protest was to show opposition to the use of submarines as "weapons of mass destruction."

They said the group believes having a priest bless a submarine is contrary to their faith. "Today should be a day of mourning, not celebration," Kavanaugh said.

Neither spoke to people attending the ceremony. They had leaflets prepared if people had questions about their group's mission.

Allen-Doucot said he was disappointed in the number of protesters. He said he remembered when there used to be a thousand people protesting outside Electric Boat.

"There's a lot of people that aren't faith based, and they lose hope," Allen-Doucot said. "I'm discouraged, but I haven't lost hope." Allen-Doucot and Kavanaugh left the shipyard's main gate at noon, without incident or arrest. They said they'll be back for the next christening.

${\bf Raising \ The \ `Widow maker \ ': \ Sub \ Prepares \ For \ A \ Come back}$

By Louis Hansen, The Virginia Pilot, June 23, 2008

The Russian submarine Juliett 484 once aimed nuclear-tipped missiles at U.S. Navy aircraft carriers.

It likely shadowed Navy warships across the Atlantic and through the Mediterranean.

With the disintegration of the Soviet Union, the once-mighty cold warrior took on a less menacing series of missions – floating night club, movie set and naval museum.

In April 2007, the storm surge from a nor'easter crept into compartments of the 280-foot boat that were no longer watertight. Juliett, slowly listing at first, dropped to the bottom of the Providence River.

It's final military mission may be as a training site for Army and Navy divers.

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The Silent Sentinel July 2008

A team of frogmen led by sailors from Little Creek Naval Amphibious Base are surveying the coal-black sunken hull alongside a pier in Providence, R.I. In three weeks, they plan to hoist the 3,000-ton behemoth from the muddy river bed.

Cmdr. Dan Shultz, lead officer of mobile diving and salvage unit 2, spotted a news story about the submarine shortly after it went down in April.

It was a chance, he said, for his divers to train on a real submarine instead of inside sunken metal containers. "It's not an opportunity that avails itself often," Shultz said.

The divers received funding under a special Defense Department program designed to support civilian projects. Last summer, the military sent divers to salvage rafts of old tires – disintegrating and polluting the Florida coast – used to make an artificial reef off Fort Lauderdale.

The sunken Russian sub has offered sailors a window into the operations of an old adversary.

The Soviets commissioned the attack submarine, also known as K-77, in October 1965. The crew consisted of a dozen officers, 16 non-commissioned officers and 54 enlisted sailors, according to the museum's Web site.

The Soviet navy routinely armed the Juliett-class submarines with four nuclear cruise missiles with a range of more than 300 miles. The diesel-powered boats were capable of destroying cities, naval installations and aircraft carriers.

With the end of the Cold War the Soviet Navy was in disarray. Four submarines were sold to a Finnish businessman in the early 1990s, said Frank Lennon, president of the foundation that runs the Russian Sub Museum. They were in such disrepair that one of the four ships sank as it was towed away.

"They had been trading pieces and parts to the point where I think they sold the plug to the bathtub," Lennon said.

The former deep-sea war machine was converted into a semisuccessful nightclub and restaurant. Juliett 484 moved from Finland to Florida and then to the auction block.

A listing on eBay for \$1 million drew no serious offers, but a film studio seized the opportunity. The boat, stripped of its engines, was towed to Nova Scotia, where it served as the set for the Harrison Ford movie "K-19: The Widowmaker."

The USS Saratoga Museum Foundation, a nonprofit organization dedicated to bringing the decommissioned aircraft carrier Saratoga to Rhode Island, successfully bid on the boat after filming wrapped.

"It was a target of opportunity," said Lennon, who is also president of the Saratoga foundation. He added that the boat cost less than the \$1 million asking price. It opened to the public in August 2002 at a pier in the Providence River.

Nearly five years later, in April 2007, high tides and heavy rain during a 30-hour stretch jostled and filled the sub while volunteers watched helplessly from the pier. Emergency personnel barred anyone from entering the listing ship. Juliett 484 sank in 30 feet of river water.

The Saratoga foundation had several dive and salvage companies inspect the site, but few could tackle the big job. A salvage effort would have exceeded the group's \$500,000 insurance coverage, Lennon said.

The foundation turned to the military for help.

Booster Club

Total for calendar year 2007: \$559 Mike Hyman 619-980-0846

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Shultz said the opportunity was too good to pass up. The cost would be split between the units and the special Defense Department fund; Shultz would not say how much the operation will cost.

Military divers and support crews arrived in Providence last month. Between 75 and 100 active-duty and reserve personnel are working on the site – installing fixtures for pumps, hoses and devices to stabilize and lift the boat. The shallow water has allowed divers to work in five-hour shifts.

Petty Officer 1st Class Eric Riggenbach, a diver, worked on submarines for several years at Norfolk Naval Station. But this training was much different from others he's performed, he said. "It's a huge operation."

"She found her way to the bottom," Shultz said. "Our intention is to bring her to the surface."

India To Get Nuclear Powered Attack Submarine In 2009

Onlinenews.com, June 23, 2008

ISLAMABAD: India will induct 12,000-tonne Akula-II class nuclear-powered attack submarine into its Naval fleet by December 2009. India will take nuclear submarine on 10 years lease in accordance with secrete agreement amounting to \$650-million stuck between India and Russia.

Violating International laws, the submarine would be armed with Agni-III and Cruise missile having range between 1,000 to 5,000 kilometers.

After inducting submarine into Indian fleet, India would have capability to easily target areas of interior Sindh and Gwadar and it would also mount pressure on Pakistan navy with regard to Indian Ocean, a high level officers of Pakistan Navy told Online.

Pakistan is also installing inclusive system in Augusta 90 submarines and as a result of this the speed and performance of these submarines would be enhanced.

According to report released by Indian magazine last weeks envisaging that nearly 300 Indian naval personnel, or three sets of crews, have already been trained to take control of INS Chakra at a specially constructed facility in Sosnovy Bor, a small town near St Petersburg in Russia.

All personnel returned after the completion of highly classified training this year. Future Advanced Technology Vessel (ATV) crews will also be trained on the Chakra, which offers a valuable training platform.

Construction of the 12,000-tonne ATV, a modified version of the Russian Charlie-II class is now nearly complete, and will be launched for sea trials next year. It will be inducted into the Indian Navy in 2009.

Nuclear-powered submarines (that was based on the Soviet Charlie II-class advance design) have higher speeds and can stay in deep sea much longer than conventional diesel-electric submarines - which have to surface or snorkel frequently to get oxygen to recharge batteries – and thereby provide a much more invulnerable launch pad for nuclear weapons.

The agreement was made between India and Russia secretly during visit of then time Russian Defence Minister to India in January 2004.

According to agreement, India was to purchase two atomic submarine and four TU-22M jet planes but later both stakeholders had agreed on construction of one atomic submarine.

It may be recalled that India had acquired Charlie II-class submarines on three year lease from Russia in 1988 after ward that was returned to native country. According to international laws, no country can purchase submarine or install missile system having range more than 300 kilometer but international laws are silent with regard to lease.

A high level officer of Pakistan Navy while talking to Online said that it is right the nuclear power attacked submarine scheduled to induct in Indian fleet would have capability to remain in water for more than 2 to 3 months. The steps taken by Indian army would further deteriorate balance of power between Pakistan and India, he said, adding that, it would also mount pressure on Pakistan with regard to Indian Ocean.

Pakistan Navy, he said, have vast experience of war, trained staff and better quality submarine as compared to Indian navy. We are also installing inclusive system in Pakistani Augusta 90 submarine prepared with collaboration of France. According to this system, we would get energy by mixing two gases and new submarine would perform better as compared to diesel run submarine.

Bridge Plans Changed Again

By Katie Warchut, The Day, June 19, 2008

The frustration level of those affected by the Thames River railroad bridge closure reached new heights Wednesday as Amtrak contractors set yet another schedule to finish the project.

The closed bridge has barred large boats from getting up or down the Thames River since June 1, causing both a monetary and logistical burden for businesses along the river.

"We have effectively locked out all our customers from our shipyard," said Adam Wronowski of Thames River Shipyard.

Wronowski grilled officials from Cianbro Corp., the Maine-based contractor, at a meeting Wednesday of the Harbor Safety Working Group at Fort Trumbull on the many delays they have experienced in replacing the bridge's moveable span.

Charles C. Beck, a representative from the Connecticut Maritime Commission, said the group had voted earlier that day to send a letter to the state's congressional delegation about how poorly the project has gone.

"You missed it by a mile," said Beck of the bridge schedule. "You're still missing it."

The project was originally scheduled for last fall, when there would have been less boat traffic. But workers had to stabilize shifting bridge piers, pushing the project to May. The latest delay, due to difficulties in removing the bridge's massive counterweight, keeps moving it further into the summer.

The newest plan is for the bridge replacement to take place Tuesday, June 24, through Friday, June 27.

Beck, transportation maritime manager for the state Department of Transportation, called Amtrak's attitude throughout the project "cavalier," considering it was originally not even planning to provide alternate service between New Haven and Boston.

Amtrak is now providing some train service between New Haven and Boston and, possibly, bus service.

Amtrak has some 13,000 reservations during the new time period and will contact all customers to try to accommodate them through the alternate routes, spokesman Cliff Black said.

Beck also asked how the Navy has been affected.

"The state went through a major battle" to keep the submarine base in Groton, he said. "People could argue that facility shouldn't be here."

A Navy representative said he couldn't comment, but did say that the USS Providence was leaving today for a sixmonth deployment. The majority of submarines can pass under the closed bridge, which has a 30-foot clearance, officials have said.

Representatives of Dow Chemical and AES Thames, which receive shipments by barge said they did not immediately know how the new schedule would affect them. The companies will likely take advantage of a 24-hour window next week when vessels can pass through between the removal of the old span and installation of the new one. However, Cianbro is asking them to schedule marine travel with the Coast Guard in certain time periods because it takes about two hours to move their cranes out of the channel.

"We've held you folks up, and we understand that," said Chet Muckenhirn of Cianbro.

The current schedule calls for the bridge to be working by July 1, but many said they wouldn't be surprised if work cut into the busy holiday weekend.

"I'm afraid we're going to see July Fourth come and go without a working bridge," said Chris Anglin, facilities operations manager for Cross Sound Ferry.

Cianbro Senior Vice President Mac Cianchette said industrial wire saws could not cut through the bridge counterweight after running into steel punchings throughout the concrete. Instead, a backhoe with a jackhammer is now demolishing the concrete.

Workers plan to remove enough of its weight so it can be supported on the existing bridge. They will install a temporary frame to hold the weight in place, and finish demolishing it after they replace the bridge span.

Cianbro and Amtrak would not disclose the cost of keeping the DonJon Marine's 1,000-ton crane on standby during the delays except to say it is "considerable." Nor did they have an estimate of the overall cost of the delays to the \$83 million project.

"Presumably, when there are cost overruns, the taxpayers are going to pay for it one way or another," Wronowski said.

The Coast Guard said it will provide a firmer schedule of when large vessels can pass under the bridge next week once it knows how many vessels need to get through.

Prince William In Secret Submarine Mission

By Nick Allen, Telegraph.co.uk, June 20, 2008

Prince William secretly spent 24 hours underwater on a nuclear submarine.

The 25-year-old Prince was taking part in a clandestine Royal Navy exercise based on hunting down an enemy submarine and sinking it.

He submerged on HMS Talent, a T-Class hunter-killer submarine off the coast near Plymouth, and spent a night on board earlier this week.

The Prince, who is known as Sub Lieutenant William Wales, is on a two month attachment to the Royal Navy.

During the exercise he spent time in the submarine's control room and saw the torpedo room where cruise missiles are kept.

When the exercise was over the Prince was dramatically winched to shore by a Sea King helicopter.

His Royal Navy attachment is the latest stage in a military career that has seen him deployed in all three Armed Services.

Later this summer he will play a front line role in the war against the international cocaine trade, serving for five weeks on the Type 23 frigate HMS Iron Duke.

His role, with 185 shipmates on the 4,900-ton warship, will be to track down and board vessels suspected of trafficking cocaine from South and Central America and he will work alongside officers from the US Drug Enforcement Administration.

On board the Prince will share a two-berth cabin, measuring 11ft by 7ft, with another young officer and be woken at 6.30am.

He will only be allowed occasional calls home to girlfriend Kate Middleton.

Radiation Monitoring Boat Opened

By Yomiuri Shimbun (Japan), June 18, 2008

Prior to the nuclear powered aircraft carrier (CVN) USS George Washington's assignment to the U.S. Naval Yokosuka Base, Japan Coast Guard (JCG) Yokosuka opened a radiation monitoring boat KINUGASA to the press corps on June 17.

The boat is 18 meter long with four crew members. When ships such as a nuclear powered submarine visit the base, the officials from the Ministry of Education, Culture, Sports, Science and Technology (MEXT) embark the boat and monitor radiation dose in the air and sea. While nuclear ships are in port, the boat conducts monitoring everyday. When the outlier is detected, it will be immediately notified to the Cabinet Office; however, it is said that cases like this has not occurred in the past.

Currently, the boat is used approximately 100 days a year. Masato Kino, Director of the Disaster Prevention Environment Office, MEXT said, "Once the nuclear powered aircraft carrier is assigned, it will be used as twice as much."

With the CVN's assignment, the radiation monitoring posts onshore will be increased from four to ten. Radiation investigation facility where will be a base for emergent investigation/analysis is also under construction.

Insurgent Submersibles

Jane's Information Group, June 16, 2008

Is it possible that terrorists could launch a submarine attack? Jane's looks at the development of improvised semi- and fully-submersible vessels and assesses their use in offensive operations.

A terrorist submarine attack might seem like a James Bond scenario, but drug smugglers linked to the Revolutionary Armed Forces of Colombia (Fuerzas Armadas Revolucionarias de Colombia: FARC) are already using semisubmersible vessels to transport multi-tonne cargoes of cocaine. Up to 40 such vessels left South American shores in 2007 and more are expected in 2008.

While these vessels are developed specifically for and financed by the illicit narcotics trade, it is not inconceivable that similar craft could be used in suicide attacks on targets such as warships or fuel tankers. A dramatic submersible strike would certainly appeal to Al-Qaeda, although small cells of jihadists would almost certainly find the technical and financial burdens difficult to overcome. With its history of innovation, the Liberation Tigers of Tamil Eelam (LTTE) is the group most likely to deploy such weapons and tactics.

Semi-submersible vessels - in the form of sealed containers towed behind ships - have been used by drug smugglers for years. The development of self-propelled semi-submersible (SPSS) vessels is a more recent phenomenon.

Captain Robert Watts, a United States Coast Guard officer who has tracked maritime drug smuggling trends, told Jane's that the first experimental SPSS was found in Colombia in 1989. However, such vessels did not become practical until global position system (GPS) technology became widely available and the US and Colombian authorities began to effectively counter the go-fast' speedboats typically used by the smugglers, according to Capt Watts.

The growing numbers of SPSS vessels indicates that their stealthy characteristics and ability to carry many tonnes of cocaine have helped them develop into what now seems to be a major component of the narcotics logistics chain. The Colombian Navy believes that during the past two to three years, cocaine smuggling SPSS vessels have been arranged mostly by the drug trafficking factions of the FARC, probably in association with organised crime groups also involved in drug trafficking.

The involvement of Colombia's largest insurgent group raises the possibility of an attack being launched with an SPSS vessel. If a single cocaine smuggling SPSS can carry 10 tonnes of cargo, a small model would easily be able to carry enough high explosives to cause significant damage to any target vessel.

Image: This relatively small cocaine smuggling SPSS was captured off Costa Rica by the US Coast Guard in 2006. Around 15 metres long, it was capable of carry three tonnes of cocaine.

U-Boats Rule The Sky

Strategy Page, June 16, 2008

Germany has successfully tested launching anti-aircraft missile from a submerged submarine (U-33, a Type 212 equipped with Air Independent Propulsion). The IDAS (Interactive Defense and Attack system for Submarines) missile is 7.6 feet long, 180mm in diameter and weighs 260 pounds. It has a 29 pound warhead and a range of at least 15 kilometers. The main targets will be ASW (Anti-Submarine) helicopters and low flying ASW aircraft. Two IDAS missiles fit into a metal frame that in turn fits into a torpedo tube. The IDAS missiles take about a minute to reach the surface, ignite its rocket motor, spot any target within range and go after it. If the IDAS misses, an air bubble from the torpedo tube launch of the missile, will reach the surface, indicating where the sub is. At that point, the helicopter or aircraft can drop a torpedo. The sub has countermeasures for these torpedoes, but these devices are not guaranteed to work every time, or against every type of torpedo (some are better at detecting, and getting around, countermeasures.)

The sub commander would use IDAS if he calculated that a helicopter was likely to spot him with active sonar sonobouys or dipping sonar. IDAS can also be aimed at a surface ship (as in the bridge or a helicopter sitting on the platform at the rear of the ship. This is done using the fiber optic link, which can use used to designate a target. Otherwise, the missile uses its heat seeking sensor.

It will be two or three years before IDAS is available for use, but it's uncertain if any navy will buy them. The concept of anti-aircraft missiles for subs is several decades old, and never actually used. But it's possible, so new models keep showing up.

UK Eases Immigration Rules For Foreign Nuclear Workers

IRNA, June 10, 2008

The British government was reported Friday to be relaxing immigration rules to allow foreign workers due to a shortage of nuclear engineers.

The changes were made as part of the government's new point-based migration system by adding 27 categories of electricity generation engineering jobs, including several with specialization in the nuclear field such as reactor physicists and nuclear design engineers to the list.

According to the BBC, some 40,000 people are estimated to be employed in the nuclear power industry, but Business Secretary John Hutton said he hoped future expansion would turn it into a 100,000- strong industry.

It comes after the government announced plans last year to build a new generation of nuclear plants to replace ageing reactors and help make up for Britain's energy shortfall.

The recruitment drive for foreign workers also coincides with that the number of staff employed at Britain's nuclear arms plants increasing by almost one-third in the past four years with the UK planning to replace its submarine-based Trident nuclear deterrent.

At the end of February, there were 4,620 staff as well as some 2,000 contractors employed at the country's Atomic Weapons Establishment at Aldermaston and Burghfield in southern England.

This compares with manpower level of 3,510 in 2004.

Under its points-based migration system, the government draws up lists of jobs for specific occupations, where there is deemed to be a shortage.

Occupations on the shortage occupation list currently also include teachers and some dentists, but the Home Office has said that this will 'change over time to reflect labor market trends'. – IRNA

Pentagon Sees Russia Strengthening Nuclear Arsenal

By Kristin Roberts, Reuters, June 9, 2008

LANGLEY AIR FORCE BASE, Virginia (Reuters) – Russia appears focused on strengthening its nuclear capabilities rather than building up its regular armed forces, which makes maintaining the U.S. nuclear arsenal increasingly important, U.S. Defense Secretary Robert Gates said on Monday.

The Pentagon chief, speaking to Air Force officers in Virginia, said America's need for nuclear weapons to deter potential enemies from striking would grow in the future.

While that is partly due to the risk that nuclear weapons will end up in the hands of anti-American groups or states, such as Iran, it is also related to Russia's plans to build its nuclear capabilities, Gates said.

"It seems clear that the Russians are focused as they look to the future more on strengthening their nuclear capabilities," he told reporters after his visit to Langley. So to the extent that they rely more and more on their nuclear capabilities as opposed to what historically has been a huge Russian conventional military capability, it seems to me that it underscores the importance of our sustaining a valid nuclear deterrent, a modern nuclear deterrent."

Moscow has boosted military spending as part of an effort to make Russia more assertive on the world stage after the chaos of the post-Soviet period. It has also tried to reform its military to create a more professional, well-equipped and mobile army.

But that reform has been slow, some critics say. The Russian military still suffers from poor morale among low-paid soldiers and generals dissatisfied with the state of the army.

Difficulty Of Reform

Difficulty reforming those forces, known as conventional forces, has led Russia to determine it may be more efficient to bolster its nuclear weapons capabilities instead, Gates indicated.

"Russia is really not investing very much in their conventional forces. It's really clear and for a whole bunch of reasons, demographics and everything else," Gates said.

Russia possesses a "triad" of strategic nuclear weapons — ground-based missiles, submarines and bombers that can reach the United States.

Last month Russian President Dmitry Medvedev pledged to funnel cash into the state's nuclear arsenal to ward off threats to national security.

"It is obvious that our task in the next few years is to ensure strategic missile forces get all the necessary funds to be ready to withstand existing threats," Medvedev told soldiers and officers a week after taking office.

Among the threats, he cited a U.S. missile defense system Washington wants to place in the Czech Republic and Poland.

The dispute over that missile shield has raised tensions between Moscow and Washington, often driving the relationship to what has appeared to be a post-Cold War low.

Gates is visiting U.S. Air Force bases on Monday and Tuesday after a sweeping shake-up of the force's leadership due to mismanagement of America's nuclear weapons and parts.

Securing the U.S. nuclear arsenal is the Air Force's most sensitive mission. But a recent investigation into the mistaken shipment of nuclear missile fuses to Taiwan found an erosion in nuclear standards and systemic problems in nuclear management

RimPac Set To Begin Off Hawaii This Weekend

By Audrey McAvoy, Associated Press, June 26, 2008

HONOLULU – Starting this weekend, the Navy will host 41 ships and over 150 aircraft for a month of international maritime exercises off Hawaii.

The drills involving the navies of nine countries from Canada to Chile are expected to last through July 31.

The Rim of the Pacific war games, held every two years, are designed to foster cooperation among nations and units.

The aircraft carrier Kitty Hawk, the Navy's oldest active ship, will have a central role this year. It's substituting for the carrier George Washington, which had been due to participate until a fire broke out on board last month.

The Navy is currently evaluating the fire damage to decide what repairs the George Washington will need.

The Kitty Hawk was brought into service 47 years ago and is the only conventionally powered aircraft carrier in the Navy. It's due to be decommissioned next year.

The last Rim of the Pacific exercises, in 2006, were disrupted when environmental groups sued to challenge the Navy's use of midfrequency active sonar during the drills.

The sonar portion of the exercises was delayed three days until the two sides agreed the Navy would adopt some additional steps to protect marine mammals.

Environmentalists say whales have been stranded and killed after being exposed to mid-frequency active sonar. The Navy says it takes steps to protect the mammals and that many factors could cause sea animals to be stranded.

Sailors use sonar to identify enemy submarines. They pump sound through the water and listen for the objects the sound bounces off of.

The Air Force, Marine Corps and Coast Guard will join the Navy in representing the U.S. in the drills.

Other nations in the exercises are: Australia, Japan, Netherlands, Peru, Singapore, South Korea and the United Kingdom.

It's Not So Much As What's In A Name As Where

Groton 'Submarine Capital' Title Challenged By Base In Washington

By Jennifer Grogan, The Day, June 27, 2008

Groton – The outgoing commanding officer of Naval Base Kitsap wants the "Submarine Capital of the World" sign removed from Interstate 95 and instead placed at the entrance to his base in the state of Washington.

"The new submarine capital is Kitsap," Capt. Reid Tanaka said in a speech given earlier this month as he relinquished command of the base.

But Capt. Mark S. Ginda says the sign, and the title, will stay in Groton.

"Even if he agrees to pay for shipping, it's not going anywhere," said Ginda, commanding officer of the Naval Submarine Base. Sixteen fast-attack submarines and the Naval Research Vessel (NR-1) are in Groton, compared to 14 submarines at Kitsap.

But Tanaka argues that Kitsap is home to all three classes of submarines – ballistic-missile, guided-missile and fast-attack. Two of their submarines, USS Connecticut and USS Seawolf, were homeported in Groton until recently.

"The shift of Navy assets to the Pacific Fleet makes Kitsap all the more important," Tanaka said, according to the transcript of his speech.

After the staff in Groton heard about Tanaka's remarks, Ginda said, "There were no emergency meetings to figure out how we were going to counter this blasphemy, if you will," because Tanaka has a "tough road ahead of him" if he wants to continue to call Kitsap the new capital.

"We have the natural synergy of the base and Electric Boat, right down the river, where the latest class of subs are built," Ginda said. "We have sub school, where officers and enlisted cut their teeth on a submarine profession that started here, as the first submarine base, and continues on as the submarine capital of the world."

Navy Approves Plan For Sonar Training Off Hawaii

By Audrey McAvoy, Associated Press, June 26, 2008

HONOLULU – The Navy adopted a new plan Thursday for training in Hawaii waters that it says will continue limiting the potentially harmful effects of its sonar on marine mammals.

The plan, created after the completion of an environmental impact statement, allows the Navy to accelerate some exercises and hold them more frequently.

Even so, its sailors are expected to use two varieties of active sonar, mid-frequency and high-frequency, for the same number of hours as now.

Environmentalists say active sonar can hurt or kill the whales and other marine mammals. The Navy says it takes steps to protect marine mammals from its sonar.

The Navy prepared the environmental impact statement to ensure it complies with federal environmental law. The Navy is conducting similar studies for training ranges off California, the Pacific Northwest and other areas.

The Hawaii Range Complex is the first to be studied.

It is not clear what affect the plan may have on a dispute between the Navy and the state over whether Hawaii has the authority to restrict sonar during training exercises.

That disagreement emerged in recent months after the state's Coastal Zone Management Agency asked the Navy to adopt a federal judge's rules governing sonar use for all of its Hawaii exercises. The judge only imposed his rules on undersea warfare exercises through January.

The Navy is questioning whether Hawaii has jurisdiction in the matter.

B.J. Penn, Navy assistant secretary for installations and environment, said in a "record of decision" report announcing the plan that the Navy would work with the state to see what other marine mammal protection measures might be "feasible and practicable."

Penn said the new plan allows the Navy to provide sailors with the skills they need to be effective in combat.

"The Navy must train its deploying forces in the most realistic manner possible," Penn said in a statement.

Penn rejected alternative plans, including using computer simulation in lieu of live training and shifting exercises to a different location. He concluded the alternatives wouldn't meet the Navy's needs.

Penn's report said no marine mammal was expected to be killed or injured as a result of exposure to Navy sonar.

But it said the animals might be affected in other ways. For example, a whale might hear sonar through the water and change its course to get away from the sound.

That would be what the Navy calls a noninjurious effect. The Navy estimates mid-frequency active sonar will cause 27,561 instances of noninjurious effects on marine mammals in Hawaiian waters each year.

The Navy said it would shield the animals from harm by adhering to a list of 29 marine mammal protection measures it adopted last year.

These include posting specially trained marine mammal lookouts on ships and shutting down active sonar when a marine mammal comes within 200 yards of the sonar source.

The Ninth Circuit U.S. Court of Appeals in San Francisco has ruled those measures are insufficient. The U.S. Supreme Court agreed this month to hear the Navy's appeal of a Ninth Circuit ruling on the matter.

Overall, the plan leaves in place key elements of Navy training.

The Navy will continue to hold a series of undersea warfare exercises that train sailors to use bounce sound through the water to find submarines.

Rim of the Pacific international maritime drills, which the Navy hosts off Hawaii every two years, will also be allowed to continue.

Sonar Training Can Coexist With Laws To Protect Marine Life

Honolulu Star-Bulletin, June 26, 2007

The Navy's application for a new permit for sonar training exercises in Hawaii waters could be the last time it will need to go through the process, depending on a ruling from the U.S. Supreme Court.

Should the court agree with the Bush administration's assertion that it has the authority to override laws that protect the environment and marine mammals, the Navy would no longer be required to seek the permits designed to minimize harm to ocean species.

The court is not expected to focus on a continuing dispute between the Navy and environmental organizations about the level of injury sonar causes to marine mammals.

Instead, justices will decide whether the administration, with the support of the military, can set aside enforcement of wellestablished law. The administration argues that protective conditions put in place by federal courts jeopardize "the Navy's ability to train sailors and marines for wartime deployment."

The claim is belied by the fact that the Navy has been able to conduct training while mitigating harm.

The case involves naval exercises off the Southern California coast in which a federal judge restricted mid-frequency sonar use and required it to be shut down when a marine mammal is sighted within 6,600 feet. In a similar ruling in Hawaii, federal Judge David Ezra established several guidelines, putting the range at 5,000 feet. The different requirements have frustrated the Navy, but they are due to variations in coastal waters and marine mammal populations.

While the California case was proceeding through the appeals court, President Bush exempted the Navy from the Coastal Zone Management Act. At the same time, an executive branch agency, the Council on Environmental Quality, granted an exemption of the National Environmental Policy Act, claiming an emergency situation. The Defense Department had previously claimed an exception for "military readiness activity," as allowed under the Marine Mammal Protection Act.

Through these laws, environmental groups have been successful in establishing restrictions, showing evidence that sonar soundings have injured or led to the deaths of whales. Navy studies have shown probable harm, disturbance or death to 175,000 marine mammals. The Navy also says only 37 whales have died from sonar since 1996, but doesn't mean that others haven't been killed without their carcasses being found.

The administration's crafty argument, however, is aimed at defining the scope of executive authority, which might be a gamble because the court has not been sympathetic to Bush's attempts to stretch presidential power.

A ruling will have implications in Hawaii, where the Navy's permit for sonar exercises will expire in January. Until the court's decision in its next term, the public has an opportunity to weigh in with the argument that training can be conducted effectively while reducing the risk of harm to animals in the sea.

Following Hearing, Stackley Poised To Become New Navy Acquisition Executive

By Emelie Rutherford, Defense Daily, June 27, 2008

Sean Stackley, a retired Navy officer and congressional staff member, appears poised to be confirmed for a short stint as Navy acquisition chief following a friction-free confirmation hearing before the Senate Armed Services Committee yesterday.

If confirmed, Stackley will become assistant secretary of the Navy for research, development, and acquisition – a post John Tahckrah has held in an acting capacity since Delores Etter left last November.

Stackley's job steering the Navy through tricky acquisition issues – including controlling spiraling shipbuilding costs and addressing an expected tactical-aircraft gap—would likely be short-lived, with a new presidential administration assuming power next January.

As the Republican staff lead for the SASC Seapower subcommittee for more than two years, Stackley oversees Navy and Marine Corps programs. He received a warm reception before his coworkers on the committee yesterday.

"The Armed Services Committee has benefited tremendously from the knowledge and the experience that Mr. Stackley brings to bear on Navy and Marine Corps programs, and on acquisition programs generally," SASC Chairman Carl Levin (D-Mich.) said at yesterday's hearing. "Should he be confirmed, our loss will be the Navy's gain."

SASC Seapower subcommittee ranking Republican Sen. Mel Martinez (R-Fla.) told Stackley: "I'm very proud of your career as a naval officer and particularly we appreciate your service to the United States Senate."

"The Navy's gain is certainly our loss," Martinez said.

Levin noted the Government Accountability Office (GAO) reported in the past year that the Navy has experienced a cumulative cost growth of almost \$5 billion with 41 ships.

"According to the GAO, the Navy pushed programs forward, quote, without a stable design and without realistic cost estimates, resulting in higher costs, schedule delays, and quality problems," Levin said.

"If anyone is prepared to answer these problems it should be Mr. Stackley."

Asked by Martinez about the DDG-1000 destroyer program, which SASC members are fighting to continue in the face of House attempts to truncate the program at two ships, Stackley said: "The Navy has done a credible job, a thorough job of establishing the requirements, identifying the risks, and putting together a development plan to retire those risks through a series of engineering development models for the top 10 technology risks for the program."

He noted the two lead DDG-1000 ships are under contract and "by all measure they are currently on track at this very nascent stage of design and construction."

"I believe that at this stage proper planning has gone into the lead ships," he said. "We are at the front end of execution. We need to maintain discipline in managing the risk to the program, discipline in managing design and requirements so we don't introduce disruption. And we need to provide the oversight required, not just in the shipyard, but in the systems development arena to ensure that the risk-management plan holds true to its intentions."

Levin quizzed Stackley on the strike-fighter aircraft gap the Navy is projected to face in the next decade, after the shutdown of the Boeing [BA] F/A-18 Hornet production line and before the ramp up of Lockheed Martin's [LMT] F-35 Joint Strike Fighter (JSF) program.

Stackley hesitated to definitively recommend continuing procurement of F/A-18s, saying more will be learned about the magnitude and duration of the strike fighter shortfall. He said he expects risk to be retired on the JSF program and intends to gain a greater understanding of a F/A-18 service-life extension program.

"There is opportunity, if there is a need, to continue procurement of F/A-18s, and that decision will need to be made based on, as always, available resources and what we understand about the JSF program at that point in time," he said. "I would not try to indicate that F/A-18s would be procured instead of JSFs with those resources, but rather if we can't get to the procurement rate that's needed for JSF in that timeframe, then an option is to continue procurement of F/A-18s."

Asked by Levin what he would do to garner better cost estimates for complex construction and development ship programs, Stackley said "we need to beef up [the] efforts" of a Navy cost-estimating group and the Defense Department's Cost Analysis Improvement Group.

"I think we need to take a harder look at the cost models that we're using," he said. "The complexity of Navy warships today far exceed what the earlier cost models used for determining cost estimates of Navy programs. Step one, improve the cost modeling.

Step two, ensure that the correlation between the requirements and the estimates are tightly coupled.

Step three, ensure discipline in the process, so you don't see growth in requirements, growth in design outside of the estimates that were provided for the program."

President Bush in May nominated Stackley for the Navy post.

In the Navy, Stackley "has the distinction of having performed a central role in the design, construction, test and delivery of three First-of-Class warships," according to a SASC biography.

He served as the LPD-17 program manager from 2001 to 2005, with responsibility for all aspects of procurement for the major ship program.

He served earlier in his career as production officer for the USS Arleigh Burke (DDG-51) and project naval architect overseeing design standards for the Canadian Patrol Frigate, HMCS Halifax (FFH 330), according to the biography.

He graduated from the U.S. Naval Academy in 1979 with a bachelor of science degree in mechanical engineering. He holds the degrees of ocean engineer and master of science in mechanical engineering from the Massachusetts Institute of Technology.

Unifying Systems JTRS-Airborne Maritime Fixed Program Designed To Connect Navy With Marines, Soldiers Ashore

By Roxana Tiron, SeaPower, July 2008

The Navy is on the cusp of turning its ships, submarines and planes into communications nodes that will enable the sea service to have its eyes and ears on the Marines and Soldiers fighting on land.

The Navy is an integral part of the ambitious Joint Tactical Radio System (JTRS) program, designed to revolutionize not only how the Navy communicates with the other services and its own assets, but how it will accommodate and use its radios. Shared radio architecture is part of a longstanding Navy plan to unify its disparate and far-flung communications systems. Ultimately, the Navy will no longer be confined by radios with a single purpose, but will be able to switch waveforms and frequencies on the fly to keep track of the U.S. military's communications across the world. "Maritime boxes [would] now be nodes in the battlespace that can share and pass information with other nodes on the battlespace," said Army Col. Raymond Jones, the program manager for JTRS-Airborne Maritime Fixed (JTRS-AMF).

The Navy's radio overhaul is part of JTRS-AMF, the first increment of an ambitious program that will eventually encompass all services. Jones' deputy is Navy Capt. Jeff Dunlap.

Lockheed Martin in March won the \$776 million contract for the system development and demonstration phase of JTRS-AMF. The defense giant is working with subcontractors General Dynamics, Northrop Grumman, Raytheon and BAE Systems to prove that the program can be realized under a compressed schedule in the next four years.

The program will reach the Milestone C production decision in fiscal 2011, with low-rate production to follow in 2012, according to Jones. If all goes as planned, full production would commence in 2014.

But the program faces its share of technical challenges, particularly when it comes to integrating the new technologies with the old to keep continuity until the entire force is able to be part of JTRS.

Jones remains optimistic. "We are in good shape with regard to meeting our milestones and thresholds," he said. The basic foundation for JTRS is a software- configurable radio that can move between different form factors, which means it can accommodate various shapes and sizes.

It includes integrated encryption and wideband networking software to create mobile ad-hoc networks – a self-configuring network of mobile routers and associated hosts connected by wireless links. The first ship to be outfitted with the maritime radio is the planned DDG 1000, said Jones. But it will be included on aircraft carriers, cruisers and submarines.

The airborne portion will outfit command-and-control and service-support aircraft such as the C-130s, C-5s and C-17s, as well as ground close-air-support and rotary-wing capabilities, for example, AV-8B Harrier, CV-22 Osprey and Global Hawk and Predator unmanned aerial vehicles. The maritime devices and ancillaries will support the Navy's Mobile User Objective System (MUOS) – a next-generation narrowband tactical satellite communications system – and its ultra-high frequency satellite communications (UHFSC).

For the "small airborne" portion of the technology, the JTRS radio and ancillaries will support several waveforms, including MUOS, Wideband Networking Waveform, Link-16 and soldier network waveform.

"If I am flying my Apache helicopter next to a Navy ship that has a maritime box and I have a small airborne box with which I can talk to them, I can reach the commander both on the ship and on the ground," said Jones, an Army experimental test pilot.

A ship, for example, would become a node on the same network the Army and the Marine Corps share. It would gain greater insight into how the ground forces prosecute war, said Navy Capt. Jeff Hoyle, the JTRS Network Enterprise Domain program manager. "You would now have the ability to have much better situational awareness on what is happening on the shore," Hoyle said.

For example, the radio could be quickly reprogrammed from tactical communications to handling medical emergencies, said Jones. The maritime version of JTRS will have eight other channels in the box for other waveforms besides MUOS and the UHFSC, said Jones.

"We can put in legacy waveforms or future waveforms," he said. This design is intended to keep the radio technology fresh, enabling vast software upgrades that don't require a major overhaul of the underlying equipment. MUOS will double the available bandwidth for the ultra-high frequency satellite communications and enable cell phone-like connectivity between all the Navy users worldwide, including submarines, said Hoyle.

But MUOS is the least far along of the capabilities the Navy is developing for the maritime and airborne portion of JTRS. This is primarily because so many aspects need to be coordinated, from the satellite ground system to the actual satellite and the end users, said Hoyle. Program management has formed the MUOS JTRS management council for the undertaking, he added.

While JTRS will greatly change the way the Navy communicates, it will also achieve another goal: scaling down radio rooms on ships and automating as much of the technology as possible.

"Maritime platforms have a lot of channels," said Glenn Kurowski, Lockheed Martin's program manager for JTRS-AMF. "They have radio rooms full of equipment, which is Sailor-intensive to run." But one cannot just hand a box to the Navy, Kurowski said.

"You have to have that capability in a form that can economically be integrated onto the ship [with] the racks, the isolation gear and all the cables," he said. "JTRS-AMF provides turnkey platform innovation kits."

Ultimately, the program will change how the radio room functions, Kurowski said. "The Navy will be connected to everybody," he said. "The maritime world is looking at the economics of providing common solutions that can be applied to multiple ship types."

As the integrator, Lockheed Martin faces some challenges, said Kurowski, particularly when it comes to porting new waveforms. Airborne part size and power of the radio box pose others, he said. Maritime radios, on the other hand, are fitted in a rack size, where power is not such an issue.

"You can put that on the challenge list, but it is not as dramatic," he said.

Platform integration also becomes difficult once many radios are placed side by side, said Jeff Jones, Raytheon's program manager for JTRS-AMF. "They start bleeding over each other," he said, noting that they need to be properly situated, with filters installed.

The Navy could exercise close to \$1.5 billion in contract options that would buy additional models and software. Roxana Tiron is a defense reporter at The Hill newspaper.

LAST MINUTE NEWS HOT OFF THE PRESS!

Navy RDA Establishes Principal Civilian Deputy Position for Acquisition Workforce

By U.S. Navy Research, Development and Acquisition Public Affairs, NAVSEA NewsWire, June 27, 2008

WASHINGTON – The Acting Assistant Secretary of the Navy for Research, Development and Acquisition, John S. Thackrah, announced June 24th the establishment of the position of Principal Civilian Deputy Assistant Secretary of the Navy for Acquisition Workforce (PCDASN (AW)).

The PCDASN will be responsible for all acquisition workforce programs and functions under the cognizance of the Assistant Secretary of the Navy for Research, Development and Acquisition (ASN RDA). Mr. James E. Thomsen has been assigned the duties of the PCDASN (AW) effective immediately. Mr. Thomsen moves over from his current assignment as the Program Executive Officer for Littoral and Mine Warfare (PEO LMW).

The establishment of the new position is another step in the overall investment strategy in the workforce taken on by the Secretary of the Navy and Naval Acquisition leadership. Last summer, the Secretary announced the nomination of a Vice Admiral to serve as the Principal Deputy Assistant Secretary for RD&A. VADM David Architzel is currently serving in that role.

"The Secretary recognizes the need for a strong investment into our acquisition workforce," Thackrah said. "As part of that investment strategy, we recognized the need to bolster the acquisition workforce leadership. The establishment of the PCDASN (AW) position is indeed another critical step in the right direction."

The focus on improving and reinvigorating the acquisition workforce is a major facet of the Department of the Navy's new Acquisition Governance initiative. Acquisition Governance is a key component in a continual process to identify and improve the effectiveness and efficiency of acquiring weapons systems.

The Secretary of the Navy, Donald C. Winter, publicly introduced the initiative during his keynote address at the annual Sea Air and Space Exposition in March. "The overriding objective of Acquisition Governance is to implement changes that will facilitate our ability to make better decisions early in the acquisition process," said Secretary Winter in that keynote address.

Those changes are already happening in the acquisition workforce. The Department of the Navy has initiated an aggressive examination of the acquisition workforce, with a view to understanding short-term and long-term staffing shortfalls and capability gaps, organizationally and enterprise-wide. That effort will ensure that the Navy and Marine Corps maintain a healthy technical authority within the various Systems Commands.

The Department of the Navy is also aggressively developing solid career tracks for both civilian and uniformed personnel within the acquisition workforce and will be seeking and recruiting the best talent from America's universities and trade schools.

"Improvement and investment in our workforce is critical," said Thackrah. "I am very confident that Mr. Jim Thomsen will provide the leadership and creativity necessary to get our workforce where it needs to be now and in the future."

As part of this personnel move, Ms. Anne Sandel has been selected to replace Thomsen as the Program Executive Officer, Littoral and Mine Warfare (PEO LMW).

Senate Sends War Supplemental Bill to President, Including Domestic Spending

By Josh Rogin, Congressional Quarterly, June 26, 2008

The Senate cleared the long-awaited war supplemental spending bill Thursday night, finally sending the measure to President Bush's desk just before adjourning for the July Fourth recess.

By a vote of 92-6, the Senate adopted the House's version of the domestic spending portion of the supplemental, which was an amendment to the base measure (HR2642). The Senate did not vote on the military funding section of the bill, because the House had already concurred June 19 with the Senate's version of that amendment.

By agreeing to the House version of the domestic spending amendment, the Senate allowed the bill to be sent to Bush, who is expected to sign it into law.

The bill "provides our troops the resources they need, does not micromanage our military commanders, and stays within the President's reasonable discretionary spending limits" for fiscal 2008 and 2009, the White House's Office of Management and Budget said in a statement of administration policy.

Just before clearing the bill, the Senate voted, 77-21, to waive the Budget Act with respect to the supplemental, in order to dispose of an objection raised by Tom Coburn, R-Okla. Coburn raised a point of order against the bill to complain about overall handling of the census, which is due to receive some funding in the supplemental.

The final clearance of the bill comes after weeks of shuffling sections of the legislation back and forth between the House and the Senate, as Democrats in both chambers argued over its contents. The final action comes only days before the Army was set to run out of funds for operations and personnel.

By using the leftover fiscal 2008 Military Construction-VA appropriations bill as a shell and adding the supplemental funding as amendments, Democrats were able to keep Republicans out of the process of crafting the bill.

Also, by splitting the military and domestic funds into two separate pieces, the Democratic leadership allowed its members to vote against the war money but in favor of domestic programs.

The military funding section of the bill would provide \$165.4 billion to support ongoing operations related to the wars in Iraq and Afghanistan, \$99.5 billion of which would be for the remainder of fiscal 2008 and \$65.9 billion for fiscal 2009, funding operations through next June.

The bill would provide \$21.1 billion for a host of domestic programs, including \$2.7 billion for Midwest flood relief and \$5.8 billion in fiscal 2009 funds to rebuild levees destroyed by Hurricane Katrina.

The bill includes \$4.6 billion in military construction funding and \$10.1 billion over two years for the State Department, the U.S. Agency for International Development and international food aid.

The bill also would bar permanent bases in Iraq and would require the Iraqi government to match funds in the bill designated for Iraqi reconstruction on a dollar-for-dollar basis.

Modernization of GI Bill

It would also provide a major expansion of veterans' education benefits, a 13-week extension of unemployment benefits and a delay of six Medicaid regulations proposed by the administration that seek to shift some costs to the states.

The bill represents a major victory for supporters of the new veterans' education benefit, based on a bill (S 22) by Sen. Jim Webb, D-Va. The benefit is a major update to the 1944 GI Bill of Rights (PL 78-346).

Under the new benefit, veterans who have served since Sept. 11, 2001, would be entitled to full tuition for four years at any public university in their home state, plus a housing stipend, after 36 months of active-duty service.

"Today's new veterans will know that we honor the contributions they have made in service to this nation," Daniel K. Akaka, D-Hawaii, said in a floor speech. "We understand the sacrifices they make, the hardships they endure, and the toll that is taken on their lives and the lives of their families."

Nuclear Weapons: The Question of Relevance in the 21st Century

Stratfor .com, June 26, 2008

Summary

The geopolitical landscape of the 21st century is profoundly different than that of the 20th century, and the bipolar competition between the U.S. and the Soviet Union that defined the nuclear weapon in its first half century of existence. Stratfor considers the relevance of such weapons in this new climate.

Analysis

About 110 U.S. B61 tactical nuclear weapons were removed from the Royal Air Force base at Lakenheath in Suffolk, England, the Federation of American Scientists said June 26. This removal of the last U.S. nuclear weapons maintained in the United Kingdom follows similar reductions at Ramstein Air Base in Germany in 2005 and in Greece in 2001. The reductions are emblematic of a continued – if slow – move away from the nuclear posture of the 20th century.

For the better part of that century, the existence of nuclear weapons was defined by the Cold War. That legacy still largely informs global nuclear dynamics to this day. Today's nuclear force structures – especially in the United States and Russia – often reflect past rather than present or future geopolitical dynamics. In our second analysis on nuclear weapons, we examine the relevance of nuclear weapons in both the last century and the current one.

Major and rapid shifts in the global nuclear dynamics will be difficult without a return to regular nuclear testing. Without that return, the knowledge base for nuclear weapons design will become increasingly theoretical and decreasingly practical – even with the aid of some of the world's fastest supercomputers. But the nuclear weapon genie is out of the bottle, meaning nothing can be ruled out.

Three Types of Nuclear Arsenals

Stratfor classifies nuclear arsenals into three main types: peer-to-peer competition, legacy arsenals and negotiation tools. These classifications help delineate underlying motivations for acquiring and maintaining nuclear weapons, some of which have shifted but many of which hold true.

Peer Systems

There is no more compelling motivation to spend the vast sums required to back a nuclear program than a serious adversary. Indeed, it was the fear of a German nuclear program that gave urgency to the Manhattan Project. When the United States dropped "Little Boy" on Hiroshima, Japan, on Aug. 6, 1945, the Soviet Union began a crash program and intensified its espionage efforts. The Cold War balance between the United States and the Soviet Union represents the most long-standing and clear example of a peer program.

Attempting to level the strategic playing field asymmetrically is a subset of the peer program. Israel, for example, exists at a profound size disadvantage, with Arab animosity in the years after the foundation of the Jewish state doing little to ease Israeli concerns. Israel acquired nuclear weapons not because a peer had them, but in an attempt to defend itself. In the special case of the Israelis, it was also justified as an "existential guarantor" by a society still haunted by the Holocaust. Generally speaking, if a small or disadvantaged country can successfully field a weapon, it will have gained an additional – and uniquely compelling – layer of defense.

The peer program is perhaps the easiest to understand, but it also is the most arcane of the three classifications. Peers such as India and Pakistan are loath to engage in the seemingly endless arms race marked by massive investment in nuclear weapons and their associated delivery systems that the United States and the Soviet Union engaged in during the Cold War. China could not dream of achieving parity with the world's only remaining superpower. And though Russia still aspires to it, the Kremlin knows that without the continuation of the Cold War arms control regime, even the facade it maintains of nuclear parity with the United States will continue to erode. Indeed, academics have begun to characterize the current nuclear dynamic as unilateral, and the present era as one of U.S. nuclear primacy.

Legacy Systems

This is a special class of program that at the moment includes only the United Kingdom and France. World War II left both countries devastated, with even the final remnants of their-once great colonial empires crumbling. After two massively destructive wars, both countries pursued nuclear weapons in the decades after 1945 (the British with much more extensive U.S. cooperation). France in particular chose this route to assert its independence under Charles de Gaulle. While the Soviet threat loomed large during the Cold War, there is little conceivable military justification today for either London's or Paris' nuclear arsenal. They exist as a legacy of an earlier era.

Nevertheless, as a tool of state, a small legacy arsenal is a terribly difficult thing to give up, and both countries recently have made high-level decisions to maintain their arsenals indefinitely. They are the ultimate guarantors of sovereignty. Additionally, the protection of this nuclear umbrella can be offered to allies, and the technical expertise can be a valuable commodity.

Negotiation Tools

A rogue nuclear program can be a powerful diplomatic lever because of the international attention it attracts. North Korea's program is the prime example of this phenomenon. Working deliberately toward a bomb for decades, Pyongyang carefully manipulated international pressures and negotiations all the while. Iran is an even more pointed example. While Tehran certainly would like to have a nuclear weapon, even the crudest device might be beyond its reach – at least for the next few years. Yet the Iranian program has been an essential part of Tehran's ability to negotiate and maneuver for the real prize: Iraq.

The 20th Century

The dawn of the nuclear age came hand-in-hand with the Cold War. For nearly fifty years, the nuclear balance was an inescapable element of the global geopolitical balance. This was an era when the world seemed to turn on calculations of throw-weight and yield-to-weight ratios, and Washington and Moscow spent vast sums of money to attain, maintain or outpace complex and ever-shifting measures of nuclear parity.

Surprisingly, the main lesson of the Cold War was that nuclear weapons function primarily not as weapons of war, but as political tools. Nuclear weapons did not deter the Chinese from conducting a massive counterattack against U.S.-led forces on the Korean Peninsula in 1950. Nor did they deter the Arabs from carrying out a devastating surprise attack in 1973 against Israel, which at that point possessed nuclear weapons. We are left with the empirical fact that, in a world of intense bipolar geopolitical conflict and extensive deployment of both strategic and tactical nuclear weapons – including everything from artillery shells to torpedoes – not once since Nagasaki have such weapons been used in combat. Ultimately, the prospect of escalation proved daunting, and the tactical utility of using even small nuclear weapons never proved compelling. Ironically, the ultimate product of the Cold War was a very strong and established international taboo against their use under any circumstances.

We do not put much stock in taboos as geopolitical constraints, however. Ultimately, no nuclear power would hesitate to use its weapons if its core national interests were at stake. But there is something to be said for a line no state wants to be the first to cross, and the value of the continued maintenance of that taboo should also be considered.

For example, if Washington or Israel decides that an Iranian nuclear weaponization program has crossed a red line, they would almost certainly engage in conventional airstrikes – perhaps sustained in the case of the United States – that would put hundreds of planes and pilots at risk. These raids almost certainly would use only conventional bombs, even though a tactical nuclear device would better ensure destruction of Iran's most deeply buried facilities. (The B61 Mod 11 is hardened to penetrate up to nearly 50 feet of earth before detonating; in addition to its larger explosion compared conventional bombs, the concussive effects of a nuclear blast would be more likely to destroy a hardened, buried facility.) Even in the event of a conventional attack, Iran probably would pull out

all the stops in terms of retaliation, so there would be little more it could do if nuclear weapons were used. The nuclear option is, at least ostensibly, always on the table. But it remains an unused option. Again, this is not to say nuclear weapons would not be used to defend a core national interest. There are certainly scenarios where Israel might feel sufficiently threatened to use its weapons. But we are nonetheless left with the empirical reality: in the course of the second half of the 20th century, it never once happened.

Meanwhile, the last decade of the 20th century closed with a marked step back from the nuclear testing that continued regularly through the 1980s. With a few exceptions, between 1961 and 1989, the world's five major nuclear powers tested at least one weapon almost annually. In that time frame, the United States conducted no fewer than 10 tests per year, and almost always many more.

The 21st Century

This shift has profound implications for nuclear weapons in the 21st century. Though a number of countries have not yet ratified the Comprehensive Nuclear Test Ban Treaty, the deal has effectively established a de facto test moratorium that has been broken just five times since 1996, the year the treaty was opened for signature. This new climate of disapproval toward nuclear testing essentially precludes the development of weapons at the pace and on the scale of the Cold War.

This does not mean a state would hesitate to "test" if the credibility of its nuclear deterrent were ever truly called into question, or if testing were necessary to adequately certify a new weapon design for the arsenal. But at present, testing on an annual basis appears to be a thing of the past. And with it, the global nuclear balance will necessarily be much less dynamic in the 21st century.

This is because the design of nuclear weapons is unlikely to stray terribly far from the architecture of the late Cold War; specifically, the roughly 100-500 kiloton two-stage thermonuclear strategic warheads. They are the most mature nuclear warhead designs in the world. (Only the United States, the United Kingdom, Russia, France, China and possibly Israel have such weapons; India's attempt to demonstrate a hydrogen bomb in 1998 fizzled.) These warheads are incredibly difficult to develop, and reliable weaponization is the product of repeated testing. Even careful refinement is tricky without actual testing, but 21st century changes to these designs are likely to be motivated by considerations such as long-term shelf life, ease and affordability of maintenance and sustainability. But as most of the people with firsthand experience designing nuclear weapons during the days of actual testing approach retirement age, a deep mastery of the institutional knowledge of weapon design will be a challenge for national nuclear enterprises in the 21st century.

Meanwhile, the deterrent value of this class of weapon is eroding. The list of scenarios in which such a devastating weapon credibly would be used is minuscule, and most such scenarios are apocalyptic. More significantly, the world cannot tolerate the use of such weapons. (Time and again in actual U.S. exercises with the National Command Authority, it has been found next to impossible to convince civilian leaders to authorize the use of nuclear weapons unless one has first been used against the United States or a key ally.) While nuclear weapons will be retained for their political value, it will be difficult to alter this perception.

Tactical nuclear weapons, with yields as small as a fraction of a kiloton, are far less devastating and have far greater tactical utility. The B61 Mod 11 would be the hypothetical weapon of choice for cave complexes in Afghanistan or hardened, buried nuclear facilities in Iran. But tactical nuclear weapons have patently failed to deter either militants hiding in caves from attacking the United States with civilian aircraft or Tehran from developing nuclear weapons. While certain sectors of the Pentagon would like to see a new generation of tactical weapons like the Robust Nuclear Earth Penetrator, the U.S. Congress seems extremely hesitant to move in this direction and has repeatedly refused to fund such efforts, even in a post-9/11 world. Even a reliable replacement warhead to simply sustain the current arsenal is a contentious issue on Capitol Hill.

While the arsenals of Russia, China, India and Pakistan appear to be more dynamic, there are very real limitations to those countries' abilities to meaningfully expand their arsenals without further testing. Meanwhile, just as the United Kingdom has scaled down its arsenal to essentially the bare minimum, others will seek to zero in on the proper force structure for the 21st century – if only for financial reasons. (A pair of comprehensive evaluations of the U.S. nuclear posture are currently under way.)

Ultimately, the United States in particular will watch carefully as India and Pakistan along with China continue to modernize and make small expansions to their own arsenals. But while the current climate against comprehensive nuclear testing seems durable, and the Comprehensive Nuclear Test Ban Treaty is fully in force, it does not preclude renewed testing down the road. The United Kingdom retains excess throw-weight on its submarine-launched ballistic missiles, and the United States will certainly seek flexibility in its next nuclear posture to ensure the capability to respond.

The nuclear weapon genie is out of the bottle. Though most states profess at least an ostensible interest in global nuclear disarmament, the very fact that the weapons can exist is enough – at the bare minimum – to keep a small arsenal of nuclear weapons in the hands of a few global powers indefinitely. Stratfor does not foresee a scenario where total disarmament is likely or geopolitically possible. There will never be a guarantee that a global power will not resume testing on a regular basis, creating the grounds for a new generation of nuclear weapons.

I'd like to thank all the folks at Undersea Enterprise News Daily for their assistance in providing me with timely articles concerning submarine related topics. They do a fantastic job! Mike Hyman, Editor