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



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The Silent Sentinel May 2010





Our Creed

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 and its Constitution.

(Continued from Page 16) Sellars has stories with datelines from all over the world: Liverpool, Belfast, Glasgow, Casablanca, Trinidad, the Panama Canal, Egypt and Brazil. He also has stories with high casualty counts: as an aviator, Sellars joined a squadron of torpedo bombers that sank two Japanese and nine German submarines.

Sellars served aboard the carrier USS Bogue (CVE-9). The small carrier chased submarines to protect convoys on their way to Europe. His first job: Pushing planes on and off an elevator. He worked his way up and became a top turret gunner.

Sellars said his squadron usually flew from midnight to 4 a.m., hunting subs. They would drop sonar buoys, every two miles, and make a square.

"We'd try to get the revolutions of the screw of the submarine picked up on our radar," Sellars said. "When we finally got the true course of the sub," he said, "we would either drop depth charges, or we would drop what they call 'The Zombie,' which was a Mark 24 Mine that chased the sound of the screw of the submarine." "It would hit that and it would stand it up like a telephone pole, and we never got any survivors off of that, usually, that went right

down."

Sellars said submarines went in wolf packs of four to seven, and had a "milk cow" sub that carried supplies of food and fuel. "We disabled one and we took 125 men off of that. That was in Christmas of 1943," Sellars said.

"We pulled into Bermuda and had Christmas dinner aboard the carrier. The captain let the German prisoners have the dinner with us," he said.

As an ordinance man, Sellars guarded prisoners in the ship's hold.

"I used to sit down there with a machine gun on my lap," he said, as the captives got Red Cross packages of sneakers, clothing, cigarettes and other items.

Sellars' squadron was awarded the Presidential Unit Citation for sinking two Japanese subs on June 24, 1944. They originated in Tokyo and went around the tip of South America. Sellars' squadron found them off the Azores, carrying crude rubber to France.

"We never got any Japanese prisoners ... both of those subs went to the bottom," he said.

Sellars got out of the Navy on April 27, 1946, his 21st birthday.

In 1951, he moved to a home on Pond Street in Avon, where he's lived ever since. He worked two jobs to support his family, and served as an on-call firefighter.

He now has 11 grandchildren, 10 great-grandchildren and is awaiting the birth of another.

"Children are my life," he said.

Sellars says he still works full time at age 84, making boxes for a publishing company that operates out of the old Shaw's warehouse in East Bridgewater. By coincidence, he worked in the same warehouse under the grocer's employ.

Sellars' story is common of the men of his era. They graduated early from adolescence, fought the war as young men, came home as heroes, lived ordinary middle-class lives, and are revered today as national treasures.

But the numbers of those men are growing fewer by the day. To wit: More than 16 million Americans served in WWII. About 300,000 died either in combat or outside the theatre of battle. Of all those who came home alive, approximately 2 million survive. They are dying at a pace of 850 a day.

In five years, there will be fewer than 1 million left.

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The Silent Sentinel via Email

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

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

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Robert Bissonnette	USSVI Base Commander

1525 Walbollen St. Spring Valley, CA 91977-3748 USSVI Base Commander c/o VFW Post 3787 4370 Twain Ave. San Diego, CA 92120-3404 DUE TO LOGISTICS CONSTRAINTS, ALL INPUTS FOR THE SILENT SENTINEL MUST BE IN MY HAND NO LATER THAN **ONE WEEK** AFTER THE MONTHLY MEETING. IF I DO NOT RECEIVE IT BY THIS TIME, THE ITEM WILL NOT GET IN. NO EXCEPTIONS! MIKE

May Meeting

Our monthly meetings are held on the second Tuesday of the month at VFW Post 3787, 4370 Twain Ave., San Diego. Our April meeting will be on 11 May, 2010. The post is located one-half block West of Mission Gorge Road, just north of I-8. The meeting begins at 7 p.m. The E-Board meets one hour earlier at 6 p.m.

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

BINNACLE LIST No new names reported--and you already know the others.

This issue of the Silent Sentinel is dedicated to the memory of Beverly Glassford

Submarine Losses in April

Submitted by C J Glassford



S-49 (SS 160) - Duty Section on Board : Battery Explosion, on 20 Apr 1926, at Submarine Base, New London, Connecticut : "4 MEN LOST"

PICKEREL (SS 177) - 74 Men on Board : Sunk, on 3 Apr 1943, by Japanese Minelayer and Auxiliary Sub "ALL HANDS LOST"

Chaser, Off Northern Honshu, Japan :

GRENADIER (SS 210) - 80 Men on Board :

Scuttled, on 22 Apr 1943, after Japanese Seaplane Attacks Malasia : Damaged the Boat the previous day, off Penang,

"4 MEN LOST - 76 MEN SURVIVED POW CAMP"

GUDGEON (SS 211) - 78 Men on Board : Probably Sunk, on 18 Apr 1944, By Japanese Naval Aircraft, Southwest of Iwo Jima : "ALL HANDS LOST" Page 4

SNOOK (SS 279) - 84 Men on Board: Probably Sunk, on 9 April 1945, by a combination of Japanese and/or Japanese Submarine, In the Nansei Soto Area: "ALL HANDS LOST"

THRESHER (SSN 593) - 129 Men on Board: Sunk,on10 April1 963,after a possible Pipeing Failure during Deep Submergence Tests, Off the New England Coast "ALL HANDS LOST"

BONEFISH (SS 582) - 77 Men on Board: Battery Fire and Explosion. on 24 April 1988, While operating off

the Florida Coast: "3 MEN LOST"



2010 Parade Schedule

June 5th, 2010 - La Mesa Village Flag Day Parade - 10:00am July 4th, 2010 - Julian Independence Day Parade - Time TBD (either 11:00am or Noon) November 11th, 2010 - San Diego Veterans Day Parade - Time TBD (probably 11:00am)

> Commanders Corner May 2010

Hello Shipmates!!!!!!! First of all The Eboard and I want to thank you all for electing us to represent Our Base and having faith in us to conduct business for the membership of the base. Again, Thanks you for your support. Hopefully everyone is having a Great Spring so far. We have a lot of events planned for the coming months. At the end of May we have our World Famous Breakfast that gets you more food than you can eat for \$6. And the company of friends, family, and shipmates. If nothing else, we could always use the help mess cooking or serve coffee. We can always use the help. The next few events are the Memorial Day Services on Base. Time TBA at the meeting and phone tree. If you have never been to this service, it pretty good with the guess speakers and the Tolling of the Boats. Not sure if we are going to get the TR for the Wreath Laying or not. There has been some issues in the past so we will see. If the city of La Mesa has their Flag Day parade this year, we will participate in it. And yes we will have the Klaxon back from repairs and upgrades. I had a sneek peek at it and it looks GREAT!!!!!!!!!

Other thing coming up in July are the 4Th of July Parade in Julian and the 4Th Annual Joint SUBVETs Picnic at the Sub Base Park. The time and day TBA hopefully at the next meeting. I'm working on the ins and outs like we had last year. I'm hoping to cut off the road blocks early this year that we had last year. And yes, if there is a boat inport and not in dry dock, we should be able to get 2 tours.

I would like to Thank everyone in the membership who has made a donation to the base for the newsletter, Booster Club, Holland Club, Scholarship Fund, or for the General Fund. Thanks again for your support of the organization.

Naval Aircraft, Escort Vessel, Coast Defense Vessels,

Let take a few moments to remember our shipmates and any of their family members who have gone on Eternal Patrol. Our thoughts and prayers go out to them and their families. Remember, your shipmates are standing by to lend a hand if needed. Please call.

It's going to be a long Summer and hopefully a fun one too. Stay safe and take care of your shelf and your family. Family is very important!!

Next Change For US Navy: No Smoking On Submarines

By Gordon Lubold, Christian Science Monitor, April 8, 2010

Washington - The US Navy will ban smoking on all its submarines this year out of concern about secondhand smoke.

Skip to next paragraph Related Stories

Cabby fights for a clean ride in smoker-friendly Japan Suspected Somali pirates more active, but US Navy fighting back The Navy determined that the ban on smoking was in order after testing aboard subs found "unacceptable levels" of secondhand smoke, despite air purification systems.

"The only way to eliminate risk to our nonsmoking sailors is to stop smoking aboard our submarines," said Vice Adm. John Donnelly, commander of the submarine forces, in a statement.

The ban, first reported online by the independent Navy Times newspaper last month, goes into effect Dec. 31.

Submariners, who serve in what's known as "the silent service," will see a lot of change in their culture. In February, the Pentagon notified Congress that it would end the longstanding ban on female sailors serving alongside men in the close quarters of submarines. The Navy will begin integrating men and women in phases, with the first women probably not appearing aboard subs for another year.

The "no smoking" decision follows a Surgeon General report in 2006 that found involuntary exposure to tobacco smoke poses health risks. As a result, the Navy conducted a year-long test aboard nine subs, concluding that nonsmoking sailors were exposed to "measurable levels" of secondhand smoke.

The Navy will help sailors who smoke by offering programs to help them quit and making nicotine patches and gum available on each boat.

"While submarine duty is a dynamic and demanding job, the Submarine Force is dedicated to mitigating unnecessary risks to our sailors," Donnelly said. "Exposure to a harmful substance that is avoidable, such as secondhand smoke, is unfair to those who choose not to smoke."

Smoking is a sensitive topic among the stretched-thin military. Last year, USA Today reported, the Pentagon was considering banning on military property the use of tobacco by troops and the sale of tobacco. One in 3 troops uses tobacco, and many rely on nicotine as a "stress reliever," according to the July 9 report, which also said that tobacco use had increased substantially since the wars in Iraq and Afghanistan.

Five days later, the paper reported, the Pentagon was "reassuring troops" that it would not ban tobacco products in war zones. Defense Secretary Robert Gates is mindful of what troops go through in a war zone and didn't want to make it harder, the paper quoted Pentagon press secretary Geoff Morrell as saying.

"He knows that the situation they are confronting is stressful enough as it is," said Mr. Morrell during a press briefing. "I don't think he is interested in adding to the stress levels by taking away one of the few outlets they may have to relieve stress."

Submarines Powered by...water?

Gadgetsteria, April 8, 2010

Wouldn't it be great if cars were powered by nothing more than common household trash? Think of all the money we'd save by not throwing it away on gas! Usually such ideas are the results of wishful thinking. Though I have no doubt that at some point in the future, you will be able to empty your trash can into your tank and drive off into the sunset one happy camper.

But even sooner, you can float away in a submarine powered by...water. It seems simple enough, I mean, at least like an awesome idea. There's not exactly a shortage of water out there in the deep blue and last I checked, submarines spend pretty much all their time in the blue stuff. A match made in heaven, right?

The tech just isn't quite there yet. For now, it's being tested with a device called the SOLO-TREC (Sounding Oceanographic Lagrangian Observer — Thermal RECharging). The SOLO-TREC uses a waxy-like phase-change substance and the combined energy released from expanding and contracting ocean water as it warms and cools. It isn't moving at lightspeed across the ocean — but it's moving, consuming less energy than it's taking in. That is the key right there to a truly unlimited power source — a renewable, reusable, limitless supply.

If they are this close now to limitless propulsion, just think of what will be

Navy Submarine Runs Eternally on Thermal Power from Ocean Currents

By Rebecca Boyle, Popular Science, April 8, 2010

A Navy-funded thermal engine bobbing off the coast of Hawaii is accomplishing a rare feat — it produces more energy than it consumes. Though it's not quite a perpetual motion machine, it could provide scientists or the Navy with a perpetual presence on the seas. The engine is attached to an unmanned underwater vessel, called SOLO-TREC (for Sounding Oceanographic Lagrangian Observer — Thermal RECharging), and uses the energy of the ocean to derive a practically limitless energy supply.

SOLO-TREC is outfitted with a series of tubes full of waxy phase-change materials. As the float encounters warm temperatures near the ocean's surface, the materials expand; when it dives and the waters grow cooler, the materials contract. The expansion and contraction pressurizes oil, which drives a hydraulic motor. The motor generates electricity and recharges the batteries, which power a pump. The pump can change the float's buoyancy, allowing it to move up and down the water column.

"In theory what you have now is unlimited endurance for something that has this type of engine," said Thomas Swean Jr., team leader for ocean engineering and marine systems at the Office of Naval Research, which funded the project. "Other things can break, but as far as the energy source, it will only stop working if the ocean ran out of energy, which is unlikely to happen ... One of the Navy's goals is to have a persistent presence in the world's oceans. This is the type of technology that leads you to that."

NASA's Jet Propulsion Laboratory and the ONR designed the thermal engine, and the Scripps Institution of Oceanography at the University of California-San Diego designed the vessel, which weighs about 180 pounds and looks like a large scuba tank. Its batteries are charged by materials that change phases in the different temperature gradients found at various ocean depths.

The float made its first dives last November and was just approved for an extended research mission.

As of this week, SOLO-TREC has made 430 dives from the surface to about 500 meters (1,640 feet), and each time, it's produced about 1.6 watt-hours of power, more than enough to operate its science instruments, buoyancy pump, GPS receiver and communications devices. You can track its path through the ocean here.

Future generations of thermal engines could harbor all kinds of scientific and surveillance instruments uninhibited by the need for replenished power. Swean said the next step is to put a thermal engine inside a sea glider, perhaps one like the "Scarlet Knight" unmanned glider that made a transatlantic trip last year.

"This type of an engine, as it matures, will find many types of applications. Gliders is one; traditional unmanned underwater vehicles is another," Swean said. "Essentially you have an unlimited energy supply and we've got an engine that is taking advantage of that."

Yi Chao, principal investigator at JPL, said a fleet of thermal-engine-powered floats could provide oceanographers with constant data about ocean salinity, pH, and other variables. Bigger floats could even accommodate hydrophones or cameras that can venture deep into the ocean, he said.

"For NASA, this is really complementary for our satellites, to what we see on the surface," he said.

Could it be used to study the oceans of Titan or Europa? Chao said maybe someday, as long as their oceans have enough temperature gradients.

But, he points out, there's plenty of research left to do right here.

"We know so little about the ocean. It would be nice to explore more of the deep sea," he said. "It would be a long time before we run out of science to do."

Underwater Robot to Stake Canada's Arctic Claim

Epoch Times, April 9, 2010

OTTAWA—Foreign Affairs Minister Lawrence Cannon visited the Far North this Monday and Tuesday to see firsthand the work of scientists who are mapping the seabed and collecting data to help establish Canada's Arctic sovereignty.

Mr. Cannon's trip took him to Resolute Bay in Nunavut, a meeting and launching base for Arctic research and expeditions, and to Borden Island where researchers at an ice camp are conducting fieldwork as part of the effort to determine the outer limits of Canada's continental shelf.

"At some point, there will be another line on the map of Canada showing the outer limits of the extended continental shelf. The staff of the Borden Island camp are among those who will have helped to put that new line on the map," Mr. Cannon said in a statement.

His arrival on Monday also marked the first dive in the Arctic of the Explorer, a Canadian-made autonomous underwater vehicle (AUV) equipped with state-of-the-art sonar technology for Arctic research and mapping.

Canada is the first country to use this type of mini robotic submarine to operate under ice in Arctic waters. The federal government acquired two Explorers last year specifically to support the northern mapping effort.

The dive from the Borden Island camp took about two hours, three or four kilometres out and then back, which is a standard first deployment when a new mission begins, said James Ferguson, vice president of Port Coquitlam, B.C.-based International Submarine Engineering Ltd. (ISE) that built the AUVs.

"Over the next few days we'll be working to understand the environment that the vehicles are operating in over longer distances," said Mr. Ferguson, noting that six or seven ISE engineers are in the Arctic helping Natural Resources Canada (NRCan) staff operate the AUVs.

ISE has been building AUVs since the mid-1980s. Mr. Ferguson said a typical mission will see an AUV programmed to travel 175 to 200 kilometres to reach the survey location. It may then do a 50-kilometre survey before returning to the starting point.

"As it approaches the end of a mission, we use a noise-source acoustic beacon that it homes in on so that we get it back to the point of recovery."

The bright yellow torpedo-shaped Explorer is 7.4 metres long and weighs 2,200 kilograms. Powered by rechargeable lithium-ion batteries like the kind used in laptops, cell phones, and other portable electronics, the AUV has a range of some 450 kilometres and can travel to a depth of 5,000 metres, or 17,000 feet, Mr. Ferguson said.

The Borden Island mission is to support Canada's land claim under the United Nations Convention on the Law of the Sea (UNCLOS). The law outlines the range of sovereign rights that a country has in its internal waters and in various maritime zones depending on the distance from shore, such as rights over research, protection, exploration, and fisheries and other resources.

The UNCLOS recognizes a country's sovereignty up to 200 nautical miles (370 kilometres) from its coastline. However, a country can claim sovereignty beyond this limit, up to 350 nautical miles (648 kilometres) from shore, if it can prove that its continental shelf extends that far as a natural extension of its land territory.

Canada ratified the UNCLOS treaty in 2003 and has until 2013 to prepare evidence and submit a claim to the U.N. Commission on the Limits of the Continental Shelf.

"The AUV has now completed three test surveys around the ice camp and has performed perfectly," said Dr. Jacob Verhoef, director of NRCan's UNCLOS Program, by email from the High Arctic on Wednesday. "We are planning one more test survey and then will send the AUV to the offshore camp, which is about 300 kilometres from the main camp."

To launch the AUV into the water requires cutting a hole through the ice and removing 30 tonnes of ice. It was not difficult to find a suitable location to cut the hole at the main camp, about 5 kilometres south of Borden Island, Dr. Verhoef said. However, he noted that it was much harder to find a location for the offshore camp. Researchers started monitoring ice floes in early January to find a suitable location.

"One of the challenges unique in the Arctic is that in many of the places we need to survey, the ice is moving," said Mr. Ferguson. After an AUV is deployed from a location on an ice floe, it may take three or four days to complete the survey. Meanwhile, the floating piece of ice may have moved as much as 40 kilometres.

"That presents somewhat of a risk in recovery. That means we have to have a much more powerful beacon for the vehicle to home in on," he said.

"Presently the drifts are small, three to five kilometres per day. However, this could change with significant wind events," said Dr. Verhoef, noting that currently the weather conditions are good at the main camp, with clear skies, light wind, and a temperature of -25 degrees centigrade.

"However, this can change quickly and we cannot say how many weather delays we will have."

Dr. Verhoef's team is collecting and analyzing data along the entire Canadian Archipelago, about 1,200 kilometres east to west. After several years focused on the eastern Arctic, it is now looking west, starting with the Borden Island mission which is expected to continue through the spring of 2010. The island mostly belongs to the Northwest Territories but its easternmost section belongs to Nunavut.

"Our data is widely spaced, along profiles several tens of kilometres apart. We have now completed over 70 percent of the [total] data collection and hope to add more to it during this survey and the next survey in the fall of 2010, jointly with the U.S., which will collect more data in the western Arctic," said Dr. Verhoef.

In addition to drifting ice, "another risk is that the bottom we're surveying is unknown," Mr. Ferguson said. "The vehicle may encounter obstacles which it can't possibly avoid in time," such as an underwater cliff.

But "there's an advantage [in the Arctic] because there's not a lot of sea life living under ice, and no shipping, so it's acoustically very quiet. The acoustic sensors and communication systems we use work over a much longer range underneath the ice than they do over an open ocean."

The acoustic sensors used to collect the survey data is manufactured by Perth, Ontario-based Knudsen Engineering Limited near Ottawa, which has produced sonar systems for Arctic survey mapping since the 1980s.

NRCan, Fisheries and Oceans Canada, Defence Research and Development Canada, and Environment Canada are collaborating on the scientific and other support work related to Canada's submission to the U.N. commission in December 2013. Foreign Affairs and International Trade Canada has overall responsibility for preparing and presenting the submission.

"We are on track for a strong submission by our deadline in 2013," Dr. Verhoef said.

"The work I saw being carried out at the ice camp is essential to Canada's continental shelf submission," said Minister Cannon. "This submission is a priority for our government as we protect and defend Canada's interests in the North."

Japan Says China Subs, Warships Came Near Okinawa

By Jay Alabaster, Associated Press, April 13, 2010

TOKYO — Japan's defense minister said Tuesday that Tokyo is investigating an incident in which two Chinese submarines and several warships were spotted in international waters off the southern island of Okinawa.

"We are now conducting a detailed analysis, and will decide on our response after a thorough investigation, including whether there was any intent toward this country or not," Defense Minister Toshimi Kitazawa said.

Encounters between China's growing military and the Japanese navy have increased in the waters between the two countries in recent years. The two governments both lay claim to valuable undersea gas deposits in the region, which they have agreed to jointly develop.

A ministry spokeswoman said there have been at least three cases of groups of Chinese military ships crossing through the area since November 2008. She asked to remain anonymous, citing department policy.

The latest case appeared to be the first involving surfaced submarines, triggering the investigation. The group of ships were observed about 90 miles (140 kilometers) southwest of Okinawa in international waters.

Last week, a Chinese helicopter came within about 300 feet (90 meters) of Japanese military monitoring vessel that was in the vicinity of a China naval exercise, the spokeswoman said.

Tokyo has asked for an explanation of that incident through diplomatic channels and has been told its request is being considered, she said.

The southern Okinawan islands also have several large U.S. military bases. More than half of the 47,000 U.S. troops in Japan under a security pact are hosted on the islands.

A Look at Britain's and France's Nuclear Arsenals

By Carsten Volkery, Der Spiegel (GERMANY), April 12, 2010

For Great Britain and France, the possession of nuclear weapons is a question of national pride, but neither country wants to eliminate its deterrent in the future. For cost reasons alone, though, the countries' arsenals are expected to shrink in the coming years.

France and Great Britain are part of a small club of the five official nuclear powers. The French force de frappe, or deterrent, is made up of approximately 300 nuclear warheads, while the British Royal Navy has just over 160. Both have fleets of four nuclear-powered and nuclear-armed submarines, of which one is always at sea. Paris maintains four more squadrons of planes with nuclear weapons, three on the ground and one at the Charles de Gaulle aircraft carrier.

Since the end of the Cold War, both countries have considerably shrunken their arsenals. The production of weapons-grade plutonium has been stopped entirely. And Great Britain eliminated all the nuclear weapons possessed by its army and air force.

Neither London nor Paris is playing a central role in the current debate over disarmament. France and Britain make the point that the United States and Russia must disarm themselves to the level of the two European countries before any need will arise for further negotiations.

Both Countries Look to Successor Generation, But Cuts Still Likely

Neither France nor Great Britain wants to fully give up their nuclear weapons, and both consider the round-the-clock nuclear deterrent to be indispensible. And both countries are working on the successor generation to weapons systems currently in their possession.

With fiscal budgets constrained, however, both countries are considering further limiting the scope of their nuclear arsenals. While speaking before the United Nations last September, British Prime Minister Gordon Brown said his country wanted to make due with three nuclear submarines in the future instead of four. The French government recently offered to create a joint sea-based nuclear deterrent by sharing submarine patrols. Experts see the proposal as a model for the future, but the idea has so far been rejected by London.

Cooperation in Europe is also complicated by the fact that the British nuclear program has long been deeply interwoven with that of the United States. The Trident II missiles that are deployed with British submarines are stored in a common pool of missiles of the same type at Kings Bay, Georgia.

Britain and France are the only countries in the European Union to possess their own nuclear weapons. As part of NATO, however, around 200 American short-range nuclear warheads are stored in Europe, including an estimated 20 weapons in Germany.

A look at the two European nuclear powers in facts:

France :

300 nuclear warheads

4 Le Triomphant class submarines, stationed at Ile Longue in Bretagne. Each submarine can carry up to 16 M45 missiles, which can in turn be armed with six war heads each.

The newest submarine, which goes into service in 2010, is armed with M51 long-range missiles with a range of 9,000 kilometers (5,592 miles).

3 squadrons of planes, each with 20 Mirage 2000N, stationed in Istres, Luxeil-Les-Bains and Saint Dizier. They are armed with air-to-surface missiles (ASMP) with a range of up to 300 kilometers.

20 Super Étendard fighter-bombers are stationed on the aircraft carrier Charles de Gaulle.

Great Britain :

160 nuclear warheads

4 Vanguard-class submarines, stationed at a base in Faslane, Scotland. Each can carry up to 16 Trident missiles (with a range of 10,000 meters) with a maximum of 48 war heads on board.

16 underground bunkers for storing nuclear weapons in Coulport near Faslane — development and construction of the warheads through the Atomic Weapons Establishment (AWE) in Aldermaston, England.

2011 Dolphin Scholarship Foundation Cartoon Calendar Contest

A total of twelve (12) drawings will be selected for the 2011 calendar.

Drawings are to be of a humorous nature depicting life in the Submarine Service.

All drawings must be

- a. Original copies will not be accepted.
- b. Drawn in black in (not pencil) on white paper.
- c. Approximately 8 ¹/₂" x 11', landscape orientation.

In keeping with the 48 year tradition of the Dolphin Cartoon Calendar, all cartoons must be hand drawn, not computer generated. All drawings become property of the Dolphin Scholarship Foundation and are not returnable.

Please print on a separate piece of paper the following information:

- a. Artist's Name
- b. If Navy member, rank/rate and duty station
- c. If dependent, include sponsor's name, rank/rate and duty station, and if under age 18.
- d. Mailing address, e-mail address and phone number

Entries must be postmarked no later than June 1, 2010.

Please DO NOT fold entry. Mail in a flat envelope.

Send all entries to:

Dolphin Scholarship Foundation 4966 Euclid Road, Suite 109 Virginia Beach, VA 23462

For more information, please e-mail info@dolphinscholarship.org or call (757) 671-3200 ext. 113.

SUBVETS Groton Base Accepting Scholarship Applications

U.S. Submarine Veterans (SUBVETS) Groton Base is now accepting Scholarship Applications from eligible candidates for the 2010 Scholarship Program.

All information concerning the SUBVETS GROTON BASE SCHOLARSHIP PROGRAM including program information, eligibility and applications can be found at the Base Scholarship Web page at USSVI Groton Base Scholarship Program.

Applications for the 2010 Scholarship Program must be submitted by 15 April 2010.

Any questions about the Groton Base Scholarship Program should be directed to John Truman at

scholarship@subvetsgroton.org or call (860) 537-0835

For additional information about SUBVETS go to http://ussvi.org and for information about SUBVETS Groton Base go to http:// subvetsgroton.org or contact Groton Base Commander John Carcioppolo at commander@subvetsgroton.org or call (860) 514 – 7064.

A Decade After Lawsuit, Debate Over 'Don't Ask, Don't Tell' Still Reverberates

By Deirdre Conner, Florida Times-Union, April 13, 2010

He had planned to be a face in the crowd.

But for Timothy R. McVeigh, a retired Navy submarine chief, staying silent ultimately proved impossible.

For more than a decade after his much-publicized landmark case under the military's "don't ask, don't tell, don't pursue" policy, McVeigh lived a quiet life in Nassau County.

On Tuesday, though, he spoke out for the first time since the late 1990s, telling his story to students and community members that gathered at the University of North Florida and speaking to The Times-Union.

In a way, it was very simple. In his 18 years working on submarines, homosexuality simply didn't come up, McVeigh said. "On my sub, it wasn't an issue," he said. "We just didn't talk about it."

The event, a screening of the documentary "Ask Not" and an ensuing discussion was put on by the Human Rights Campaign, a gay rights group.

With a high number of military veterans at the university, Ryan Miller, coordinator of UNF's Lesbian, Gay, Bisexual and Transgender Resource Center, said the group had been seeking to hold a discussion of the issue for a while.

"They're out there," Miller said of LGBT vets at the school.

Interest in the issue has spiked since President Barack Obama urged Congress to repeal the law banning gays and lesbians from serving openly in the military. A bill has been introduced in both the House and Senate, and recently, the military announced it will restrict evidence used in investigations against gay service members.

Current policy, introduced during the Clinton administration, still bars lesbians and gays from serving openly in the military. McVeigh thinks the time preceding the "don't ask, don't tell" policy was easier.

"Before 1993, no one really cared,' he said. "After the policy, it became tougher because it brought it up more."

An 18-year veteran who achieved the Navy's highest enlisted rank, master chief petty officer, worked in submarines from the time he enlisted just after high school.

Before the Navy sought his dismissal, he was chief of the boat on the USS Chicago.

McVeigh became the subject of national and international news in 1998, when he fought his dismissal from the Navy in what is now seen as a pivotal military and electronic privacy rights case.

After a federal judge ruled he should not have been dismissed, the case settled. Ultimately, according to an Associated Press article in 1998, McVeigh retired and the Navy admitted no wrongdoing, although a judge had ruled that military investigators violated electronic privacy law and military rules by launching a "search and destroy mission" to link McVeigh to an anonymous online profile page, which listed his marital status as "gay." The investigation took place while he was out at sea, McVeigh said.

It drew the ire not just of the judge but also of gay rights advocates and electronic privacy experts. America Online later admitted it violated its own policies.

A Nassau County resident since his retirement - his mother lived in the area - McVeigh has maintained a low profile since then.

McVeigh said that over the years he figured that the surveys indicate that broader public opinion may be changing. A February poll released by the Washington Post-ABC news poll found that 75 percent of Americans now favor letting openly gay people serve in the military; in 1993, it was 44 percent.

When he watched Obama declare that he wanted to end the policy and allow gays and lesbians to serve openly in the military. McVeigh was more guarded than celebratory.

He'd rather wait until a bill is passed by Congress.

"I've though that [it would be repealed] before," he said. "Let's see what happens."

110 Years of Submarines

Broadside Blog, April 13, 2010

On Sunday, April 11th, the U.S. Submarine Force celebrated its 110th birthday. From its humble beginnings in 1900, the silent service has developed into a naval component that is the most deadly, the most effective, the most indestructible force in the world.

That's a big claim. But I challenge anyone to dispute it.

It is fascinating to compare the submarines of today to SS-1. Here are the specifications of John Holland's design for the first official submarine of the U.S. Navy (from the Naval Historical Center):

USS HOLLAND (SS-1) Power Plant: Otto Gasoline Engine (surfaced) Electric batteries (submerged) Length: 53.8 feet (16.4 meters) Beam: 10.7 feet (3.3 meters) Displacement: 64 tons surfaced, 74 tons submerged (65/75 metric tons) Speed: 6 knots (11 kph) Crew: 1 Officer, 6 Enlisted Armament: One 18-inch (457 millimeters) torpedo tube, Three Whitehead torpedoes Date Deployed: 12 October 1900 (USS Holland) And here are the specifications for today's modern submarine (from Navy News Service fact file) Modern Attack Submarine Propulsion: One nuclear reactor, one shaft Length: 377 feet (114.8 meters) Beam: 34 feet (10.4 meters) Displacement: Approximately 7,800 tons (7,925 metric tons) submerged Speed: 25 + knots (28 + miles per hour, 46.3 + kph)Crew: 134: 14 Officers; 120 Enlisted Armament: Tomahawk missiles, twelve VLS tubes, MK48 ADCAP torpedoes, four torpedo tubes. Modern Ballistic Missile Submarine Date Deployed: Nov. 11, 1981 (USS Ohio) Propulsion: One nuclear reactor, one shaft. Length: 560 feet (170.69 meters). Beam: 42 feet (12.8 meters). Displacement: 16,764 tons (17,033.03 metric tons) surfaced; 18,750 tons (19,000.1 metric tons) submerged. Speed: 20+ knots (23+ miles per hour, 36.8+ kph).

Crew: 15 Officers, 140 Enlisted.

Armament: 24 tubes for Trident II submarine-launched ballistic missiles, MK48 torpedoes, four torpedo tubes.

In the time between its birth over a century ago to today's modern fleet of nuclear submarines, thousands of men have answered the call to fight beneath the waves. Some have never returned from patrol.

In WWII alone, fifty-two submarines were lost, and over 3500 men were killed.

It is a job that has no room for error. Perfection isn't just expected, it is required.

Today's Submariner is smart, technically proficient, and so good it almost seems unfair. Ask any Surface Warrior how good a U.S. submarine is. It can't be found, even if you know where it is. You only know a submarine is in the area when it wants you to know.

But ask that same Surface Warrior how it feels to know a sub is operating in the area, and he or she will tell you how comforting that fact is - doubly so when operating in a combat situation.

So happy birthday to the Submariners of the U.S. Navy. You have earned your reputation through hard work, a ton of studying, and commitment to being the best.

And you are.

Russia Delays Launch Of New Nuclear Submarine

Novosti, April 13, 2010

Russia will not float out a new nuclear-powered multipurpose attack submarine as planned on May 7 due to technical reasons, a source in the shipbuilding industry said on Tuesday.

Construction of the Severodvinsk, the first Project 885 Yasen (Graney) class submarine, began in 1993 at the Sevmash shipyard in the northern Russian city of Severodvinsk but has since been dogged by financial setbacks. Russia planned to float out the submarine on May 7 to mark the 65th anniversary of the victory over Nazi Germany in May 1945.

"The launch of the new Severodvinsk submarine has been delayed for technical reasons," the source said, adding that the sub would be floated out and pass sea trials later this year.

Graney class nuclear submarines are designed to launch a variety of long-range cruise missiles (up to 3,100 miles or 5,000 km) with nuclear warheads, and effectively engage submarines, surface warships and land-based targets.

The submarine's armament includes 24 cruise missiles, including the 3M51 Alfa SLCM, the SS-NX-26 Oniks SLCM or the SS-N-21 Granat/Sampson SLCM. It is also equipped with eight torpedo launchers, as well as mines and anti-ship missiles such as SS-N-16 Stallion.

The Severodvinsk is expected to enter service with the Russian Navy by late 2010 - early 2011.

Last year, work started on the second sub in the series, the Kazan, which will feature more advanced equipment and weaponry. Russia's Navy commander, Adm. Vladimir Vysotsky, has called the construction of new-generation nuclear-powered ballistic missile and attack submarines a top priority for the Russian Navy.

Sweden to Invest In New Submarines

Defence Talk, April 13, 2010

The Swedish military is set to shell out billions of kronor for two new state-of the-art submarines while also upgrading two older vessels, defence minister Sten Tolgfors has revealed, defence minister Sten Tolgfors has revealed.

Writing in the Sunday edition of Stockholm daily Svenska Dagbladet, the minister conceded that the Baltic Sea area remained stable, with only Kaliningrad and St. Petersburg breaking the circle of EU and NATO-affiliated countries.

"However, one can never rule out long-term risks and incidents, which could also be of a military nature," Tolgfors wrote. The multi-billion kronor investment is to be included in next week's spring budget proposal, he added.

Ship builder Kockums said in February that it had signed a contract with FMV (the Swedish Defence Materiel Administration) regarding the construction of next-generation submarines.

"This is an important first step, not only for Kockums, but for the Swedish Armed Forces as a whole," said Kockums CEO Alfredsson in a statement released at the time.

"We shall now be able to maintain our position at the cutting edge of submarine technology, which is vital in the light of current threat scenarios. HMS Gotland demonstrated what she is capable of during two years of joint exercises in the water off the USA. This next-generation submarine marks a further refinement of technology", he said.

Until now however the Swedish government had not given any indication of the scope of its plans. Along with the two new vessels, two Gotland class attack submarines will also receive major upgrades as part of the investment.

Tolgfors said the move would ensure that Sweden's submarine fleet maintained its "top international calibre". The minster also shared Kockums' view that the next-generation Swedish submarine would attract a great deal of interest abroad and would likely lead to export deals in the future.

Navy Leader: Women Could Serve On Subs Within Two Years

By ED FRIEDRICH, Scripps Howard News Service, April 14, 2010

BREMERTON, Wash. - Integrating women onto U.S. submarine crews is "absolutely the right thing to do," and, unless Congress acts in the next few weeks, they likely will be serving beneath the sea within two years, the Navy's civilian leader said.

In an interview at the Puget Sound Navy Museum, Secretary of the Navy Ray Mabus said he's gotten nothing but positive response from Congress.

Defense Secretary Robert Gates delivered a letter to Congress Feb. 22 notifying it of the Navy's desire to change its policy. The House and Senate have 30 working days to pass a law barring the move. The review period, during which Congress will ask senior Navy officials how they plan to make the change, won't conclude until mid to late April, the Navy has said.

If Congress does not block the historic change, the first women submariners could be based near here in Kitsap County at Naval Base Kitsap-Bangor, home to 10 of the Navy's 18 Trident submarines. The others are at Kings Bay, Ga. Each Trident has Blue and Gold crews, each with 15 officers and 140 enlisted men.

Women graduating this spring from the Naval Academy and college ROTC programs would be the first female submariners, after 18 months of training. They've shown a lot of interest, said Mabus, who became secretary last May

The first women will all be officers. They would start out on the Ohio-class subs because the boats wouldn't need to be modified. There'd be a minimum of four women per sub. A senior female officer would probably transfer from the surface nuclear fleet to mentor the young officers, Mabus said.

The female candidates would have to attend basic submarine officer school, nuclear prototype training and nuclear reactor school, which takes more than a year.

Women would join smaller attack subs later. Existing ones would be modified for them, and new ones would be designed for coed crews.

"We plan to do a little bit of both to make sure we don't have some subs women can go in and some they can't," Mabus said. Women have been allowed to serve aboard surface ships since 1993, when Congress repealed a law that prevented them from serving on combat vessels. Submarines weren't included because of their space limitations and extended mission requirements.

India's Nuclear Example

By RORY MEDCALF, Wall Street Journal, April 14, 2010

U.S. President Barack Obama's nuclear-security summit this week raised speculation in the media once again about a South Asian arms race. There is understandably deep concern in many capitals about the apparent acceleration of Pakistan's production of fissile material for nuclear weapons, a potential source of leakage to terrorists. But the implication that India is also participating in some sort of unbridled nuclear-arms race needs to be treated with caution. In fact, in some ways New Delhi's nuclear-weapons posture could be the model to which President Obama's new policy of American nuclear restraint aspires.

India appears to be shaping—through choice as much as necessity—a minimum credible nuclear deterrent. Publicly available estimates of its arsenal size suggest that the second most populous nation in the world, located in a dangerous regional neighborhood and with two nuclear-armed neighbors, has only tens of nuclear warheads at its disposal, perhaps none of them thermonuclear. By comparison, the United States has about 2,700 deployed strategic warheads, and Russia has around 3,900. Both countries also have substantial tactical stockpiles—yet both are presenting their new treaty to reduce those figures to 1,550 apiece as a great leap for disarmament.

New Delhi has, by and large, a declared "no first use" nuclear-weapons policy. India qualified this policy in 2003 to reserve the right for India to strike back at chemical or biological attacks—a stance which the U.S. is now beginning to move away from. But India's nuclear doctrine remains overwhelmingly defensive and focused on deterrence.

Of all the nuclear-armed states, India has been the most active in promoting global agreement on no first use—including through bilateral and multilateral treaties—and on negative security assurances, or guarantees not to strike non-nuclear states. Even China, the most self-righteous doctrinal champion of no first use, has rejected India's overtures for a bilateral pact, not wishing to be seen to bestow any form of nuclear legitimacy on a power it likes to pretend is not a rival.

Questions remain about the effectiveness of New Delhi's deterrent, and its likely need to enhance, if not expand, the arsenal. Ultimately, a no-first-use policy can be credible only if it is accompanied by what security wonks like to call an "assured second-strike capability." In other words, India needs to be confident that enough of its assets would survive an enemy's first strike for New Delhi to be able to retaliate.

The best chance of assuring second-strike capability comes from a submarine-based deterrent, and that is exactly what New Delhi has slowly and unevenly been pursuing over the years. Progress is finally being made on this front, with sea trials of an indigenously produced nuclear-powered submarine—presumably with Russian help, indirect or otherwise—and advances toward developing a suitable missile, albeit with short range.

But India is, at the very least, years away from being able to use submarines to deter its two potential nuclear adversaries, Pakistan or China. Though many arms-control scholars might not like to acknowledge it, India's eventual success in fashioning such a strategic tool might just end up being a net benefit for strategic stability in Asia as China increases its power, reach and confidence. In the meantime, Pakistan's efforts to expand its arsenal could be seen as a bid to gain not just parity but even nuclear superiority over India. This is especially troubling given the context of the Pakistani army's continued forbearance, if not support, for the use of Pakistan's territory as a base for terrorism against Indian targets, despite India's conventional military advantage.

So it is surprising how relaxed the Indian effort at expanding its nuclear capability continues to be. Of course, this could change, were New Delhi genuinely to see nuclear weapons as its top national defense priority—in other words, were India to adopt the Cold War superpowers' arms-race mentality.

Paradoxically, treating India as part of the proliferation problem, rather than part of the solution, may only encourage New Delhi down such a dire path. Closer U.S.-India strategic ties are needed partly as a way of giving India the sort of strategic confidence it needs to keep its arsenal small.

Some critics of the U.S.-India civil nuclear deal argue that it has helped drive nuclear competition between India and Pakistan, by "freeing up" for weapons purposes parts of India's small domestic atomic-energy infrastructure. After all, although the deal puts a growing majority of India's reactors under International Atomic Energy Agency monitoring, New Delhi has declined to allow such "safeguards" to be enacted for its experimental fast-breeder program and eight indigenous power reactors, though they are far from ideal for bomb making.

However, Pakistan's actual behavior and India's potential behavior are very different things. Treating them with artificial equivalence, in the old hyphenated way, is a sure way to alienate India from the U.S. nuclear arms control and security endeavors. Of all the powers, India was the one most short-changed by the 1970 Nuclear Non-Proliferation Treaty. The world can no longer afford to leave it out of the nonproliferation and nuclear security tent, which is why it was a relief that even though the media talked about it, a South Asian nuclear arms race remained off the official agenda in Washington this week.

Future SSBN 'Will Not Be Based On Virginia Class'

By Sam LaGrone, Jane's Navy International, April 15, 2010

The US Navy has ruled out suggestions that its Virginia-class attack submarine could form the template for a next-generation ballistic missile submarine (SSBN[X]), according to sources familiar with the early findings of an analysis of alternatives (AoA) into the Ohioclass replacement programme.

Proposals for a Virginia Block IV variant - with a missile compartment for the Trident D5 ballistic nuclear missile or a successor weapon - were studied by officials, but declared not feasible due to infrastructure and missile design costs, one source said.

In particular, it was determined that inserting a new hull section approximately 100 ft (30 m) long into the existing Virginia design to accommodate Trident would cost as much as developing an entirely new SSBN, another source added.

The Virginia design modification has been shelved in favour of an entirely new submarine as the navy looks to replace its 14 Ohioclass SSBNs with a class of 12 boats.

The service would not confirm any findings from its studies into the

SSBN(X) programme; a spokeswoman would only say that they were "under review".

The move from a 14-boat nuclear deterrent force to 12 is outlined in the navy's Fiscal Year 2011 (FY11) budget - the first time the service has incorporated the cost of an Ohio replacement into its spending estimates - and in its current 30-year shipbuilding plan. A total of USD955 million in SSBN(X) design funding is planned to be allocated in the FY15 budget, and initial procurement activities for the first of the new submarines are expected in FY19.

The Grunion Mystery, Solved At Last

A submarine commander's sons succeeded in locating the watery grave of their father and his crew. *By Matt Grills, The American Legion, March 19, 2010*

Nearly three years after USS Grunion (SS 216) was found off the Aleutian Islands, Bruce Abele continues to puzzle over what sank his father's submarine in the early days of World War II.

In 2006, Abele and his two younger brothers, John and Brad, made headlines when an ocean-surveying firm they hired to scan the floor of the Bering Sea sent them an image of an oblong object with features resembling a conning tower and periscope mast.

The next summer, a remotely operated vehicle (ROV) confirmed the object as the wreckage of a U.S. submarine. At last, the Abele boys had solved the decades-old mystery of what happened to their father, Lt. Cmdr. Mannert Abele and his 69-man crew.

Since then, experts have poured over photos and video footage of the discovery, theorizing about what caused Grunion's loss on July 30, 1942. Clearly the submarine went below crush depth and imploded; a channel left from its descent down an underwater slope is visible in photos.

"The rear dive plane is clearly in dive position, and that tells us they lost depth control," says Bruce Abele, 80.

But why? An account by a Japanese officer aboard the freighter Kano Maru claims that after being torpedoed by a submarine north of Kiska, Alaska, the crew saw ripples in the water, fired their deck guns and hit its conning tower.

"We originally thought a 3-inch shell had hit the shears, the supports that hold the periscope," Bruce says. "Recently, though, we met Cmdr. Charlie Tate, who did eight war patrols on Gato, a sister ship of Grunion. He told us the damage to the shears was almost

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certainly not caused by a 3-inch shell, but by something larger. Right now the hypothesis we are leaning toward is that it was a circular torpedo that did not explode."

If that's the case, Kano Maru actually shot at a washing wave caused by the bubble that rose to the surface when Grunion imploded. A jammed rear dive plane combined with a disruption would have left the submarine unable to blow its forward ballast tanks and falling fast.

In August 1942, the Navy recognized Grunion as missing. The Abeles never even got to say goodbye to their father, whom everyone, even his sons, affectionately called "Jim." He took them to lunch at the Officers' Club at the submarine base in Groton, Conn., before saying he had work to do. That work was a classified mission in the North Pacific.

"We didn't see him a great deal because he was always at sea," Bruce says. "Even when he was lost, and we didn't hear about that until Sept. 30, 1942, it was kind of almost a paperwork thing. But as time went on it had an impact."

As the years passed, Brad Abele started compiling what the brothers call "The Jim Book." When Grunion disappeared, Bruce was 12, Brad was 9 and John was 5. Originally written for family and friends, "The Jim Book" describes the Abeles' memories of their father – a Naval Academy graduate who loved soccer – and what it was like growing up without him.

The book also includes notes from students who learned under Abele at NROTC at Harvard. One of them, Endicott "Chub" Peabody, was an All-American defensive lineman on the football team who went on to become governor of Massachusetts. Peabody credited Abele with inspiring him to serve on submarines.

More and more, "The Jim Book" fueled the Abeles' curiosity. What exactly had happened to their father?

The story that would become their groundbreaking quest to find Grunion began in 1998, when Air Force Lt. Col. Richard Lane paid a dollar for a wiring diagram of a winch from Kano Maru at an antiques store in Denver. Hoping to learn more about the ship, he posted a query online in 2001. A Japanese historian and translator named Yutaka Iwasaki replied, saying the diagram was indeed authentic and that he also thought he knew what happened to USS Grunion. Iwasaki had discovered and translated an old article published in a 1960s Japanese maritime journal by a naval officer who served aboard Kano Maru, describing the ship's battle with a submarine near Kiska.

Lane contacted Commander, Submarine Force, U.S. Pacific Fleet (COMSUBPAC), which had a Web site dedicated to Grunion. There, he posted Iwasaki's information.

Meanwhile, Bruce's son's fiance shared a copy of "The Jim Book" with her boss, a World War II history buff, who sent Abele a list of Grunion-related Web sites. "I'd seen them before and I almost didn't take a look," he says. "Then I saw the post from Yutaka Iwasaki saying he thinks he knows what happened to Grunion and, most important, a rough idea of where it was. That was huge."

The Abeles searched for Iwasaki's e-mail address, and after a string of 70 messages, John found one from Iwasaki. He sent a message asking if he was the one who knew something about Grunion. Finally, a reply arrived: "It is me. I have prayed for repose for your father's soul."

Armed with knowledge of the submarine's approximate location, the brothers became serious about finding the submarine. John Abele, who founded Boston Scientific, the global manufacturer and marketer of medical devices, suggested bringing in Robert Ballard of Titanic fame.

Though Ballard declined to join them, "he gave us a kindergarten course in finding a sub," Bruce says: start with sidescan sonar, which can cover a swath width of two or three miles at a time, then send down an ROV.

In August 2006, the Abeles hired Williamson & Associates of Seattle to conduct sonar scans off the Aleutians, spanning an area about 250 square miles. An Alaskan crabbing boat, the Aquila, ferried the equipment.

"They were sending us e-mails every day, and I was getting up at 2 o'clock in the morning to see what was going on," Bruce says.

A week into the search, scans detected a long, narrow silhouette 3,200 feet deep. Though 20 feet shorter than Grunion, the object appeared to have a curious appendage resembling propeller guards found on submarines of that type.

Just before the expedition, Iwasaki contacted the Abeles, saying he'd visited Japan's military archives and found a chart listing the exact coordinates of the submarine. "It was almost right on the money," Bruce says.

Certain they'd found what they were looking for, the brothers sent Aquila back a year later, this time with an ROV. Almost right away, it returned images of a badly damaged submarine: a 50-foot section of its bow missing, exposed pipes and hoses, interior bunks and a dive wheel, an aft battery hatch blown wide open. With water pressure at 1,300 pounds per square inch, Grunion imploded.

"There's no question about what happened," Bruce says.

The submarine's discovery prompted a search for the families of Grunion's crew. For that task, the Abeles had round-the-clock help from three women they call the "sub ladies": Mary Bentz of Bethesda, Md., Vickie Rodgers of Mayfield, Ky., and Rhonda Raye of Cartersville, Ga.

Bentz lost her uncle, Carmine Parziale, on Grunion. Rodgers' great uncle, Merritt Graham, went down too, along with Raye's greatuncle, Paul Edward Banes. Together the women spent two years tracking down every one of Grunion's 70 families.

They scoured genealogy files, phone books, marriage records and newspaper obituaries. On the same day the submarine's wreckage was found by the ROV, Bentz went on a Detroit talk-radio show to ask for information on anyone who might know relatives of Seaman Byron Traviss of Michigan, the only family she hadn't located. Amazingly, the wife of Traviss' cousin heard the broadcast and called in.

"She said, 'I have his Purple Heart hanging on my dining-room wall," Bentz says.

The sub ladies also consulted a large volume of letters from Mannert Abele's wife to families of the Grunion crew.

"My mother was extremely disciplined," Bruce says. "After we got notification of Grunion's loss, she handwrote a condolence note to every one of the next of kin, and then when Jim got the Navy Cross, she wrote a second note. We have three large loose-leaf notebooks all organized by crewmember with all the correspondence that went back and forth. You cannot read that stuff with a dry eye. It's just incredible."

With Grunion's families located, Bentz went to work calling the hometown newspapers of each crewman, asking for an article or obituary.

"My focus right now is to have them honored in every possible place," including the World War II Registry, the Navy Memorial and the National Purple Heart Hall of Honor in New York, she says.

Sadly, Brad Abele died in 2008, a few months before 200 relatives of the Grunion crew – including two sailors' widows – gathered for a memorial service aboard USS Cod in Cleveland.

As the crew's names were read, Grunion's own bell tolled. Removed before battle because of its weight, the bell laid in a scrap heap at Pearl Harbor until the 1950s, when a chaplain asked if he could keep it. He took it home to Greenville, Miss., and later donated it to the city's visitors center. As it happens, a Grunion crewman, Edward Knowles, came from Greenville. His sister, Geraldine Kendrick, told Bruce about the bell, and arrangements were made to borrow it for the memorial.

The story of Grunion's discovery is filled with such coincidences, he says.

There's also been healing. Before its own sinking, Grunion sunk two Japanese sub chasers. Iwasaki found the widow of one of those sub chaser's commanders, now 99, and the Abeles sent her pressed flowers from Kiska, the island just south of the confrontation. With appreciation, she sent a hand-woven gift to "the sons of Catherine E. Abele."

Questions still surround what exactly transpired aboard Grunion before it sank, but at last the grave site of its crew is known.

"That obviously means a lot to us," Bruce says. "But it also means a lot to so many families."

Matt Grills is managing editor of The American Legion Magazine.

A 1960 Submarine Smoking Ban Lasted Just Three Days

By David Collins, The Day, April 16, 2010

Many of us landlubbers were a bit startled by last week's announcement by the Navy of plans to ban smoking on submarines by the end of the year.

Really? You can smoke now on submarines?

Even news anchor Steve Inskeep, in reporting the story on National Public Radio's "Morning Edition," sounded a bit incredulous.

"It's hard to believe it took until 2010 to figure this out, but the Navy has decided it's a problem if you smoke on a submarine,"

Inskeep began his report, before citing the government's new studies proving the health risks of second-hand smoke on subs.

Indeed, people posting to news stories about the smoking ban that appeared around the world reacted with a mixture of surprise and humor.

Some suggested crew members could just step outside to light up. Others worried, now that women will soon be on board, about sailors missing out on a post-coital smoke.

A few wondered: Will commanders now order more trips to the surface?

The Navy said it plans to provide programs to help sailors quit and will lay in a lot of nicotine patches and gum for future deployments.

Still, with official estimates putting the number of submariners who smoke at 40 percent of the service, you have to wonder how well a boatload of detoxing sailors are going to get along.

To get a little perspective on what to expect I poked around in the news archives and found some reporting on a 1960 experimental smoking ban aboard the submarine Triton.

The Triton left New London in Feb. 16, 1960, on what was supposed to be its shakedown cruise but which turned out instead to be a surprise and unprecedented underwater circumnavigation, lasting until April 25.

The Navy put medical researchers on board to learn a little more about the physical and psychological effects of spending such a long time under water in close quarters.

The research included a smoking ban that was supposed to be 10 days long, but ended after just three, when the crew started to get a bit more than cranky.

Of course the decision to abort the study early might have been influenced by the fact that the doctor in charge was also a smoker.

A good account of the smoking ban experiment comes from the submarine's captain, Edward L. Beach Jr., who went on to write an entertaining account of the trip in his 1962 book, "Around the World Submerged: The Voyage of the Triton."

Beach, who also wrote the classic World War II submarine novel "Run Silent, Run Deep," exhibits a wry sense of humor in describing his crew's "sufferings." Beach, too, was a smoker.

"Everyone on board was determined to go through with the test in good heart and spirit, but as the dread day for putting out the smoking lamp approached, various reactions were noticeable among crew members," Beach wrote. "The nonsmokers were lording it over the others, and there was an aura of apprehension among the habitual smokers."

The Triton, he noted, had laid in a good supply of candy and chewing gum.

Not long after the test began, Beach said, "overt feelings of hostility" began surfacing and there were also "signs of forced gaiety, with an edge to it."

On April 18, after only three days of deprivation, Beach relit the smoking light himself, by strolling the ship with a lit cigar, blowing smoke into crew members' faces, and asking, "Don't you wish you could do this?" "It took some 37 seconds for word to get around," Beach said, and the Triton was once again a smoking submarine.

In fact, the smoking light remained lit on all submarines for another 50 years.

The doctor in charge of the 1960 experiment reported three years later to a convention of the Cigar Institute of America, according to The New York Times, that the sailors didn't like having their tobacco taken away.

"When a smoker is forbidden to smoke he just doesn't like it," the doctor reported. "The smokers in the test got irritable, ate too much, had trouble sleeping, and personal relationships began to deteriorate."

Even back then, it seems, the Navy depended on extensive medical research to uncover the obvious.

Russia to Build Submarine-detecting Satellite

Novosti, April 15, 2010

MOSCOW — Russia could build a satellite for the detection and tracking of submarines from space, a defense industry spokesman said on Thursday.

Vladimir Boldyrev, of the Kosmonit science and technology center, said the group had developed a space satellite module that could carry out remote sensing of the sea and "detect submerged submarines."

"Hopefully, it will be tested in space as early as 2011," he said, adding that work on the module started over a decade ago.

He offered no indication as to when the new satellite would enter service with the Russian Armed Forces. Boldyrev added that the dual-use module would be used for both defense and civilian purposes, in particular, providing meteorological data.

Nasty Little Suckers

Strategy Page, April 16, 2010

North Korea has a fleet of over 60 mini-subs, and about 25 older Russian type conventional boats. North Korea got the idea for minisubs from Russia, which has had them for decades. One of their miniature subs are suspected of recently (March 26th) torpedoing a South Korean corvette. The South Koreans are retrieving the wreckage of the corvette, and that will enable them to determine what sank the ship.

North Korea has developed several mini-sub designs, most of them available to anyone with the cash to pay. The largest is the 250 ton Sang-O, which is actually a coastal sub modified for special operations. There is a crew of 19, plus either six scuba swimmer commandos, or a dozen men who can go ashore in an inflatable boat. Some Sang-Os have two or four torpedo tubes. Over thirty were built, and one was captured by South Korea when it ran aground in 1996.

The most popular mini-sub is the M100D, a 76 ton, 19 meter (58 foot) long boat that has a crew of four and can carry eight divers and their equipment. The North Koreans got the idea for the M100D when they bought the plans for a 25 ton Yugoslav mini-sub in the 1980s. Only four were built, apparently as experiments to develop a larger North Korean design. There are to be over 30 M100Ds.

North Korea is believed to have fitted some of the Song-Os and M100Ds with acoustic tiles, to make them more difficult to detect by sonar. This technology was popular with the Russians, and that's where the North Koreans were believed to have got the technology.

The most novel design is a submersible speedboat. This 40 foot boat looks like a speedboat, displaces ten tons and can carry up to eight people. It only submerges to a depth of about ten feet. Using a schnorkel apparatus (a pipe type device to bring in air and expel diesel engine fumes), the boat can move underwater. In 1998, a South Korean destroyed sank one of these. A follow on class displaced only five tons, and could carry six people (including one or two to run the boat). At least eight of these were believed built.

Montenegro Gives Away Yugoslav-Era Submarines

Balkan Travellers, April 15, 2010

The defense ministers of Montenegro and Slovenia will sign a contract today in Podgorica for the giving away of a 1980 submarine. The P-911 submarine, which has been in the coastal town of Tivat in southwestern Montenegro since 1997, is being gifted to

Slovenia as a museum piece.

The submarine is one of the six so-called "pocket submarines" produced for the needs of the Yugoslav Navy in the 1980s. They measure 18.8 meters in length, 2.7 in width and 3.4 meters in height.

At the time of their production, it was said that, "in case of war, [the submarines] could reach the shores of Italy and take demolition experts there to secretly create small minefields."

In addition to the one that is to be gifted to Slovenia, Montenegro has three other such submarines. According to previous reports, the plan is to keep one of them in Tivat for the future nautical museum Porto in Montenegro and give the other two away to Serbia and Croatia, where they would also be displayed in museums.

Avon World War II Veteran Recalls His Years In The Navy

The number of living local World War II heroes is falling rapidly By Mike Melanson, Enterprisenews.com, April 18, 2010

AVON — The year was 1942, Richard Sellars of Stoughton was 17, and he didn't much feel like going to detention.

He endeavored for something greater in life, so instead of serving his punishment for talking in class, he played hooky from Stoughton High School and headed toward the city.

"I wasn't going to stay after, so I didn't come the next day," Sellars, now 84, said. "I went to Boston and joined the Navy." In doing so, he set himself on a path that took him around the world and put him in the thick of military action.

Now, on Patriots Day, as Sellars prepares for his 85th birthday, he stands not just as one of a rapidly dwindling number of surviving local World War II veterans, but one who still works full time and speaks about the war in remarkable and precise detail. (Continued on Page 1)

Minutes of the Submarine Veterans Inc., San Diego Base meeting held on April 13, 2010.

1900 Meeting called to order by the Base Commander, Bob Bissonnette. Conducted opening exercises: Reading of the Creed. Pledge of Allegiance Chaplin lead in Prayer Conducted Tolling of the Boats for April. Moment of silence was observed. Assistant vice Commander announce all E-board members in attendance. Secretary announced there are 36 members and one guest, Philip Tipple, present. Treasurers' report was presented. The Minutes for the month of March has been posted on Web site sentinel. Parade committee Report: Linda Vista parade will be this Saturday, April 24 starting at 1100. We will be using our float and if you would like to attend sign up in the back of the room. Upcoming parades- July 4th at Julian. Membership report: We presently have 344 members on record. Scholarship fund: 3 candidates have applied, and we have selected two of the candidates and we will present the scholarship awards in Julv. Store keepers report: We are still working to get decent prices for new ball caps. Breakfast committee: The next breakfast will be held on May 31 at 800 to 1200. Please come and support the base and we are still in need of volunteers. 1920 Base commander called a break for 50/50 drawing. 1940 Meeting called back to order by Base commander. Unfinished business: Discussed Linda Vista parade which will be 4/24/10 starting at 11 but we would like everyone to gather at 1000. If you need a ride to the parade please call Ed or me and we can provide you a ride. Next month we will have pictures available of the dedication service of the San Diego Submarine Memorial. New business: The Subvets WWII flag was damaged during the rainstorms while being stored in the float. We have contacted a company that will fix the old flag for 200.00 dollars. King flags want 200.00 dollars, plus setup charges. Base commanded presented a nomination to spend 200 dollars for fixing the flag. Motion accepted, Seconded, voted on motion, ayes have it. Motion passed. Good of the order: Chair wishes to thank CJ for his contribution to the Submarine Memorial dedication service. Well Done CJ Old Timers Luncheon will be this Friday, April 16 at 1030 at the Submarine Base. Organizers will need a head count on who will attend the luncheon. (approximately 16 members raised there hands) CJ gave additional information on Old timers Luncheon and The Submarine Ball. The national web site has a new link ... Today in History, it list Boats, with detailed description, and all history and other information. We have some good information on American legion magazine. Go to www.legion.org Ron Gorence (membership) Please look on the USSVI web sight to up date your personnel information. Ron also suggested that if you unable to do so you can pass the information to him and he would input the information. National web sight also has a link to find all submariners who have ever served aboard submarines.

National web site has a listing of all candidates who are running for National offices. Voting has not been set up yet, but will be soon.

David Kauffman the new Webmaster informed the members about new links and up dates.

2005 Meeting adjourned by Base commander.

Sailing List: JIM BILKA TOM POLEN ED WELCH BOB FARRELL CHARLIE MARIN DAVID BALL BEN ROLLISON FRED FOMBY JIM MALDON EVERETT MAUGER ED FARLEY PAUL HITCHCOCK

RAY FERBRACHE JACK ADDINGTON ART DAVIS ROY BANNACH RON GORENCE TIM WARNER PHILL RICHESON PHILLP TIPPLE(GUEST) CHARLIE TATE MERT WELTZIEN ROBER OBERTING BOB COATES MANNY BURCIAGA ROBERT WIELAGE BOB BISSONNETTE DENNIS MORTENSEN BOB CHAPMAN CJ GLASSFORD DON MATHIOWETZ MATT BAUMANN DONALD WALBAUM HARRY MCGILE JOEL EIKAM DAVID KAUPPINEN

If You Want To Keep Your Driver's License, Don't Get Stationed In Guam

Hartford Courant, April 19, 2010

If you want to hang onto Connecticut driving privileges, don't get stationed in Guam.

That's been the experience of some submariners at the Groton submarine base and members of their families. Guam, despite being a U.S. protectorate, won't send electronic copies of driving records to the state Department of Motor Vehicles. And because of the island's refusal to cooperate, the attempts of submariners and their families to obtain driving privileges in Connecticut after they have lived in Guam have gotten tangled in red tape — sometimes for months.

The DMV made a decision last week to cut through its own bureaucracy in agreeing to accept licenses from the island without obtaining motorists' driving records first. It is a welcome courtesy to members of the military and families who are, after all, sacrificing for everyone.

There is a larger issue here, however. Service personnel who have Connecticut licenses can renew by mail if their license expires when they are overseas. But our state has no similar provision for the family members of military personnel who have to follow in their parents' or spouses' footsteps.

A bill in the Connecticut General Assembly would prevent military members' licenses from expiring if they are stationed overseas. That's a good idea, but it should go further. Connecticut should emulate the state of Washington, which extends this privilege to service members, their spouses and children.

Such a law would make Connecticut a more accommodating state to the military and their families: It would leave them with a few fewer examples of annoying regulations. And nearly everyone can use less complication nowadays.

Experts Suggest Possible Attack By N.K. Submarine

By Song Sang-ho, Korea Herald, April 19, 2010

With an external explosion being cited as the most likely cause of the sinking of the Cheonan, allegations are growing that a torpedo, fired by a North Korean submarine, could have caused the disaster.

Experts say that given the shallowness of the waters near the western inter-Korean maritime border, a 325-ton shark-class submarine could have entered South Korean waters undetected.

Rep. Kim Hak-song of the ruling Grand National Party who chairs the National Assembly's defense committee said on April 5 that he was briefed by the military that movements of two shark-class submarines at the North's naval base in Bipagot — some 80 kilometers north of Baengnyeong Island — were detected before and after the incident occurred on March 26.

Kim also said the whereabouts of one of the submarines was not verified, fueling speculation that a North Korean submarine entered the South's waters and fired a torpedo at the Cheonan, which was traveling 1.8 kilometers southwest of Baengnyeong Island.

If a shark-class submarine traveling at 13 kilometers per hour had come from Bipagot, it would have taken six to seven hours to reach the waters near Baengnyeong Island.

To avoid being detected by the South's surveillance, the submarine might have operated only underwater. However, experts say that the submarine should come above the water periodically for air.

"It depends on how many people are aboard the vessel. The submarine should come above the water to emit carbon dioxide created by crewmembers inside," a submarine expert told The Korea Herald on condition of anonymity.

Experts believe that if the North's submarine had infiltrated the South's waters, it might have moved from the waters far west of Baengnyeong Island rather than taking a route between the island and the North's province of Hwanghae.

They believe that the North's submarine could not take the route because of the tidal currents between the island and the province and the South's military has been tightening its security along the route.

As the ill-fated ship was torn in two and sank after an explosion on its port side, experts believe a submarine operating one or two kilometers west of the ship could have fired a torpedo.

Experts believe that it would have been difficult for a submarine operating on the ship's right side to fire any underwater weapon as the waters on the right side are shallow. The torpedo appears to be a mid-sized one with a warhead weighing more than 200 kilograms, given that the explosion ripped the 1,200-ton vessel apart.

Some question why the ship equipped with a sonar system could not have detected a torpedo.

The Defense Ministry said that the possibility of the sonar system detecting movements of a submarine or a weapon some 2 kilometers away in waters with a depth of 30 meters is about 70 percent.

Some said that to avoid being detected by the South, the North's submarine could have entered the South's waters by taking a route where many Chinese fishing vessels operate.

"When a submarine is located where many fishing boats are operating, it is difficult to recognize it as a submarine as it is shown as a dot along with other dots indicating the fishing boats on the radar screen," said the source.

The shark-class submarine measures 35.5 meters in length, 3.8 meters in width and 3.2 meters in height, and can carry up to 20 crews and some four torpedoes. In 1996, a 320-ton shark-class North Korean submarine went aground off the east coast.

What The Navy Wants In Its Next-Generation Ballistic Missile Submarine

By Loren B. Thompson, Ph.D., Lexington Institute, April 29, 2010

The most important weapon system in the U.S. arsenal isn't an aircraft carrier or a long-range bomber. It is the Trident ballistic-missile submarine, designated SSBN in naval nomenclature ("SS" for submarine, "B" for ballistic missile, "N" for nuclear propulsion). The Trident, also called the Ohio-class after the lead ship in the program, is the biggest submarine ever built for the U.S. Navy because it was designed to have 24 launch tubes containing long-range ballistic missiles — with each missile carrying up to eight independently-targetable nuclear warheads. A single Trident submarine thus is capable of destroying a medium-size country. What makes Tridents so important, though, isn't just their fearsome firepower but the fact that once they are submerged and on station somewhere in the Atlantic or Pacific Ocean, they are impossible for enemies to find. They thus provide the backbone of the secure retaliatory force that is at the heart of nuclear deterrence.

It is a measure of how successful the Trident program has been that most Americans are barely aware the subs exist. There have been no major mishaps in the three decades the vessels have been at sea, and no adversary currently seems capable of targeting them when they are on station. But the 14 Tridents still executing the ballistic-missile mission (four were converted to non-nuclear roles during the Bush years) are getting old. The first boat in the class was commissioned in 1981, and the last in 1997. Preservation of a secure deterrent force requires that construction of new ballistic-missile subs commence not later than 2020, so that next-generation vessels can enter the fleet as the nuclear cores of existing boats are wearing out. The Navy plans to begin a six-year design cycle for the next-generation SSBN in 2012, leading to construction of a lead ship starting in 2019. But why develop a new sub if the existing submarines are so good? Why not just build more Tridents? Basically, there are three reasons for starting from scratch.

The first reason is that the next-generation SSBN must be even quieter than today's Tridents, because it is likely to carry most of the U.S. nuclear force and therefore must have an assured capacity to withstand surprise attack. Advances in sensors, processors, software and networks since Trident first put to sea raise the possibility that a future adversary may find some way of tracking Tridents. With only a handful of ships in the class and some of those not at sea on any given day, it is essential that any "signatures" potentially usable by enemies for targeting be minimized. At the very least, the future boats must be as quiet as today's Virginia-class attack subs, which are only half the size of a Trident. Virginias themselves lack the internal volume to host highly-capable ballistic missiles, and any effort to modify them for that purpose would increase acoustic and other signatures in a self-defeating manner, so a new boat must be designed to guarantee the survivability of the future deterrent.

A second reason why the new sub must be developed is so that it can have a "life-of-ship" nuclear core. The Tridents require costly and time-consuming mid-life replacements of nuclear fuel in the reactors that drive their propulsion systems. These refuelings remove the vessels from service for a year or longer, and thus reduce the readiness of the fleet. Virginia-class attack subs have a nuclear core designed to last the full 30 years they are expected to be in service, but the planned lifetime of the next-generation SSBN is 40 years, so a different kind of reactor core must be developed. By developing a life-of-ship core for the Trident replacement, the Navy can reduce the number of boats in the deterrent force from the current 14 to 12, since it will not have to factor mid-life refuelings into the nuclear readiness posture. That should result in substantial savings across the lifetime of the program, because each new SSBN will cost at least \$5 billion to build and mid-life refuelings have cost the Trident program about \$1 billion per boat.

The third reason a new SSBN is needed is because virtually every facet of on-board technology has changed since the U.S.S. Ohio was commissioned in 1981. Back then there were no fiber networks, no laptop computers, and no flat-panel displays. Processing power was expensive and people were relatively cheap. Today, processing power is dirt cheap and each nuclear sailor costs the Navy over \$100,000 per year. Tridents have been continuously upgraded since their inception, but by completely redesigning the next generation of subs, crew-reducing automation features and vastly improved functionality can be introduced into every aspect of

shipboard operations. Navy planners haven't yet figured out how a program that costs \$20 billion to design and develop and \$60 billion to construct will fit into the service's chronically tight shipbuilding budget, but they already are convinced that pursuing a new ballistic-missile sub makes more fiscal and operational sense than trying to modify a Cold War design.

Second Chinese Naval Demagnetization Facility Spotted

By Hans M. Kristensen, FAS Security Blog, April 19, 2010

The Chinese navy has constructed what appears to be a demagnetization facility near an East Sea Fleet submarine base.

The facility is the second spotted at Chinese naval bases since 2008.

Chinese Naval Demagnetization Facilities

The new demagnetization facility is located less than 10 km from the Kilo submarine base at Maocao Nong approximately 40 km southeast of Ningbo in the Zhejiang province.

Seven Kilo-class submarines were visible at the base on January 15, 2009, nearly a third of the roughly 19 diesel-electric attack submarines that are deployed with the East Sea Fleet.

The East Sea Fleet facility was built between August 2007 and March 2008.

The East Sea Fleet facility is the second known Chinese demagnetization facility. In April 2008, I identified the first such facility at the South Sea Fleet base near Yulin on Hainan Island.

The South Sea Fleet facility was constructed sometime between January 2006 and February 2008.

The two demagnetization facilities are similar but with differences. The South Sea Fleet facility is built in a c-shape, similar to the U.S. design. The East Sea Fleet facility, which is located in a river, consists of two parallel piers, perhaps to accommodate strong currents.

The Purpose of Demagnetization

Demagnetization is conducted before deployment to remove residual magnetic fields in the metal of a vessel to make it harder to detect by other submarines and surface ships. It reduces the ship's vulnerability to mines that are triggered by magnetic signals from metal hulls. Demagnetization apparently also can improve the speed of the vessel.

Both submarines and surface ships are demagnetized at regular intervals.

Nuclear-powered submarines including SSBNs are based at the North Sea and South Sea Fleets, but not at the East Sea Fleet. I suspect that we'll see construction of a North Sea Fleet demagnetization facility soon.

Some Implications

Occasional Chinese naval force operations get prominent attention in western news media, such as the recent transit between Okinawa and Miyako Island of eight destroyers and two submarines. Routine operations by U.S. forces, on the other hand, are rarely described except when they involve large exercises or when incidents occasionally expose secret options such as the Impeccable incident in 2009.

Mining of harbors and costal areas would likely be an important mission for both U.S. and Chinese attack submarines and antisubmarine warfare forces in a hypothetical military conflict between China and the United States. Chinese naval forces have, despite ongoing modernization, significant technological and operational deficiencies.

So why has China not constructed naval demagnetization facilities earlier? After all, other naval powers have done so for decades after German engineers during World War II invented the magnetic mine. According to one report, China appears to have used degaussing vessels rather than fixed facilities.

Perhaps construction now reflects acquisition of new technology, a decision that fixed facilities are more efficient than degaussing vessels, or that modifications to China's naval strategy make demagnetization more important.

Whatever the motivation, the construction of demagnetization facilities at China's fleets are clear tell-signs of the cat-and-mouse game that is in full swing in the region between the naval forces of China and the United States and its Asian allies.

Israel Builds Up Deep-Sea Navy

United Press International, April 21, 2010

Israel is building up its navy and it's looking to Germany to provide the warships, most notably two advanced corvettes and two, possibly three, more Dolphin-class attack submarines, that will transform it from a coastal force to a deep-water navy.

Until now, the navy has been largely confined to the Mediterranean countering the naval forces of Syria, Egypt and the Maghreb states further east, with occasional forays into the Red Sea.

The objective of the expansion program clearly seems to be to increase the navy's reach to counter Iran, which Israel views as its primary adversary because of its buildup of ballistic missiles and its alleged drive to develop nuclear weapons.

The main focus of the naval expansion program is negotiations with Germany to buy two MEKO A-100 corvettes from the Blohm+Voss shipyard in Hamburg. Jane's Defense Weekly says the 2,500-ton, 280-foot MEKOs would be adapted to carry Israelimade systems.

The warships, which carry crews of 94, have a range of 4,635 miles, a top speed of 30 knots and advanced radar-evading capability. They carry one medium-size helicopter and 24 weapons systems — 16 ship-to-shore and eight anti-ship missile launchers adapted to U.S. weapons as well as air-defense missiles and automatic cannon.

The Israeli navy had shown interest in Lockheed Martin's Littoral Combat Ship to fit its requirement for a new missile ship to be categorized as Saar 5.5. But the U.S. vessel was considered too expensive at \$600 million. The MEKO variant sought by Israel costs an estimated \$300 million.

Negotiations with the Germans began in October 2007 when Israeli Chief of Staff Lt. Gen. Gabi Ashkenazi visited Berlin. The Israelis want a discount on the proposed MEKO deal of 20-30 percent, said Jane's.

The Germans are already funding one-third of the total cost, estimated at \$1.4 billion, of two 1,900-ton Dolphin submarines, based on Germany's Type 212A boat currently on order.

These were ordered in 2006 and are scheduled for delivery starting in 2012 to the submarine base at Haifa. That will bolster the Israeli navy's sub strength to five.

The subs, the most expensive weapons platforms in Israel's arsenal, have a range of 2,810 miles. However there were reports in October 2009 that their fuel capacity had been increased to keep the vessels at sea for 50 days without refueling.

German opposition parties, including the Social Democrats, have expressed misgivings about exporting weapons to crisis zones. But the 2006 order for two Dolphins was approved while the Democrats were part of a coalition government.

Germany has provided hefty discounts on arms sales to Israel because it is morally committed to the Jewish state's security in reparation for the Holocaust.

Talks are under way on Israel acquiring a sixth Dolphin built by the Howaldtswerke-Deutsche Werft in Kiel and the Thyssen Nordseewerke in Emden.

The Israeli subs' four 650mm torpedo tubes have been reportedly modified to launch cruise missiles armed with nuclear warheads.

Each Dolphin is believed to carry 10 U.S.-built Harpoon missiles but these have a range of only 135 miles. Still, that gives these boats a limited strategic first- or second-strike capability.

With six Dolphins, the Israelis would be able to maintain at least two or three deployed in the Arabian Sea off Iran's southern coast at any one time or at their Red Sea naval base at Eilat on the Gulf of Aqaba ready for swift deployment against the Islamic Republic.

Israel has threatened to launch pre-emptive strikes against Iran's nuclear facilities if it fails to halt its alleged weapons program.

One Israeli source noted that the navy would like even more Dolphins. "Our ideal number would be nine — enough to ensure we have the necessary assets at sea to cover all relevant threats and targets," he said.

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Lawmaker Wants Key Submarine Document

By Christopher P. Cavas, Navy Times, April 22, 2010

A key congressman who oversees Navy programs on Capitol Hill is threatening to recommend against funding development of a new ballistic missile submarine if the service doesn't fork over its analysis of the program.

Rep. Gene Taylor, D-Miss., chairman of the House Seapower subcommittee, complained in a letter sent Thursday to Defense Secretary Robert Gates that the Navy "refuses to share" the analysis of alternatives (AoA) for the SSBN(X) program - a document that, Taylor says in the letter, was completed last year.

Rather than commit to replacing the current crop of large Ohio-class submarines armed with Trident II D5 ballistic missiles with similar ships, Taylor wants to see what a smaller, Virginia-class submarine armed with a less-lethal ballistic missile would cost. Instead, he says, the Navy already has decided it wants the bigger and more expensive ships - which some sources say could cost as much as \$70 billion.

"I have repeatedly asked officials of the Department of the Navy if less-expensive alternatives to building the Ohio-class were examined," Taylor said in the letter. "I have repeatedly been told that only the Trident solution met the requirement."

The Navy's refusal to share the AoA with Congress, Taylor said, "is under the guise that final approval has not been obtained."

Yet, he pointed out, \$495 million was spent last year to develop a missile compartment "that would only support a Trident II D5 weapon" - and the Navy is asking for an additional \$672 million this year "to continue development of an exclusive Trident replacement vessel."

As a result, Taylor threatened to work against the Navy's SSBN(X) request unless the AoA is sent to Congress, along with an explanation for how much nuclear deterrent capability the nation needs.

Taylor asked Gates to "direct the Secretary of the Navy to deliver to me the completed AoA for this program notwithstanding any final approvals from other officials in the Department of Defense."

Additionally, Taylor said in the letter that he would ask House Armed Services Committee chairman Rep. Ike Skelton, D-Mo., for a "thorough investigation" of how the SSBN(X) program "apparently bypassed acquisition requirements" and already began system design and development, and ask for a full committee hearing "to determine the true national requirement for sea-based nuclear deterrence."

The letter comes as Taylor's committee is preparing its markup of the 2011 defense authorization bill, expected to take place in mid-May.

Sailor Found Dead Aboard Sub Nebraska

By Philip Ewing, Navy Times, April 22, 2010

A sailor was found dead Monday aboard the ballistic-missile submarine Nebraska at sea, according to a Navy spokeswoman, marking the third death aboard the ship in the last five years.

Machinist's Mate Fireman William Mack, 21, was found dead in the submarine's berthing spaces while the ship was underway in the Pacific Ocean. The cause is under investigation, said Lt. Kellie Randall, a spokeswoman for Submarine Group 9; she said there was no damage to the ship and there had not been an accident.

Mack's mother, Susan, of South Pittsburg, Tenn., told Navy Times on Thursday she had not yet been told what happened to her son, or exactly where the ship was when his body was found.

"He died at 10 a.m. That's all I know. I asked them, 'Where did my son die?' and they said, 'Ma'am, you will never know."

The Nebraska sailed March 18 from Naval Submarine Base Bangor, Wash., on a normal deterrence patrol. It surfaced this week "off Hawaii," Randall said, to take aboard agents from the Naval Criminal Investigative Service, who conducted an investigation for about 36 hours. Nebraska then met up with another boat, as was scheduled, to deliver people as part of an exercise. Mack's body and the NCIS agents were transferred to the second boat, Randall said.

Nebraska, in the hands of its Gold Crew, will continue its patrol without a replacement crew member.

The Silent Sentinel May 2010

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Mack is the boat's third sailor to die aboard since 2005. On Jan. 6 of that year, Machinist's Mate 3rd Class Aaron Scrimiger, 25, hanged himself in the machinery spaces while the ship was in port. On Sept. 20, 2008, Machinist's Mate 3rd Class (SS) Michael Gentile was killed after being "entangled and pinned" as he worked on the rudder machinery while Nebraska was at sea.

Susan Mack told Navy Times that her son wanted to be a college professor; he was planning to study history at the University of Tennessee at Chattanooga.

"Poor little Will," she laughed, "in all his vacations he never knew about Disneyland - he thought we were supposed to go to old cemeteries and courthouses and historic things like that."

He hadn't been quite ready for college when he finished high school, so he elected to join the military. It was a choice between the Army and the Navy, she remembered.

"The Navy's been so good to our family. That's how all my uncles were educated. And Will loved Annapolis - we visited Annapolis when he was a little kid, and he used to say, when I get married I want to get married at Annapolis, with the crossed swords and everything.' And I reminded him of that, so he said, "You're right, that's the good one - the Navy's the good one.'" He enlisted Dec. 3, 2008, and reported to Nebraska Aug. 4, 2009, records show. He was on his first deployment.

Beijing Defends Buildup Of Its Nuclear Arsenal

By GORDON FAIRCLOUGH, Wall Street Journal, April 22, 2010

SHANGHAI-China needs weapons capable of retaliating against any nuclear attack on the country, according to a commentary published Thursday in the nation's main military newspaper that sought to explain the strategic thinking behind Beijing's push to modernize its atomic arsenal.

Nuclear-capable missiles are displayed at a massive parade to celebrate the 60th anniversary of the founding of the People's Republic of China on October 1, 2009 in Beijing.

The commentary in the official Liberation Army Daily also reiterated China's longstanding stated policy that it "will never be the first to use nuclear weapons at any time and under any circumstances."

Written by a retired general, the piece follows last week's international nuclear-security summit in Washington and comes amid questions in the U.S., Japan and elsewhere about the intent behind China's efforts to strengthen its nuclear forces.

In recent years, China has been expanding its arsenal of ballistic missiles and investing in weapons that are more mobile and sophisticated. The country has also developed a new generation of submarines capable of launching nuclear weapons.

Even so, China's atomic arsenal-with fewer than 100 long-range missiles capable of delivering nuclear warheads, according to the Pentagon's 2009 estimate of Chinese military power-remains far smaller than those of the U.S. or Russia. Washington and Moscow recently agreed to limit their deployed nuclear warheads to 1,550 each. However, opponents of arms reductions by the U.S. have argued that such cuts could make it easier for China to catch up in terms of nuclear capability.

Officials in the U.S. and elsewhere have called on Beijing to better explain the motives behind the Chinese government's increased spending on both nuclear and conventional forces.

The commentary's author, Xu Guangyu, who now works for the state-run China Arms Control and Disarmament Association, said in an interview Thursday that he was responding to complaints from abroad that China's nuclear intentions are "not transparent." Gen. Xu said he wanted to dispel "misunderstandings" and challenge those who "promote a China-threat theory by exaggerating China's nuclear capabilities."

China has developed solid fuel-powered rockets that can be moved by truck, making them easier to launch and harder for foreign militaries to track than the liquid -fueled, silo-based missiles that previously had been the mainstay of China's nuclear force. The country also appears intent on deploying nuclear-armed submarines.

The point of such steps, Gen. Xu wrote, is "to really possess, and to convince the other side that it faces an intolerable secondstrike nuclear capability, thereby deterring an enemy from using nuclear weapons against us." Other states, he said, "must grasp, without the least ambiguity, that we possess a deterrent." He also stressed that China "adheres to a defensive nuclear strategy." In its annual report on the Chinese military last year, the U.S. Defense Department said China has developed a "more survivable and flexible strategic nuclear force" that "would be able to inflict significant damage on most large American cities." But the report concluded that: "There is no evidence that China's doctrine of 'no first use' has changed."

Indo-US Naval Wargames Begin In Arabian Sea

The Ecoonomic Times, April 23, 2010

NEW DELHI: The ten-day long Indo-US wargames began on Friday in the Arabian Sea, strengthening the relationships between the two navies to maintain

peace and stability.

The thrust of the Malabar CY 10 exercise this year would be on Anti-Submarine Warfare (ASW), Surface Firings, Maritime Interdiction Operations (MIO), Visit Board Search and Seizure (VBSS) and Submarine Operations.

Malabar CY 10, conducted from April 23 to May 2, is the fourteenth series of the Malabar round of exercise. The US Navy's frontline units of 7th fleet and Indian Navy's Western Fleet are participating in the exercise.

The scope of Malabar exercise includes diverse range of operational activities at sea. During Malabar CY 10, the US Navy will be represented by ships from CTF 70 of the USN 7th Fleet which is based at Yokosuka, Japan.

The CTF will include the Cruiser USS Shiloh (CG 67), Destroyers USS Chaffee (DDG 90), USS Lassen (DDG 82) and Frigate USS Curts (FFG 38). In addition, one Los Angeles class nuclear powered submarine, USS Annapolis (SSN 760), two P3C Orion aircraft and a 28-member US Navy Special Forces team will also participate in the exercise.

INS Mysore, an indigenous Delhi Class guided missile destroyer and three guided missile frigates, INS Godavari, INS Brahmaputra and INS Tabar, will represent the Indian Navy. In addition, one Shishumar class submarine, INS Shankush, Sea Harrier fighters, other fixed and rotary wing aircraft are also scheduled to participate in the bilateral exercise.

"Naval cooperation between India and the US epitomises the long-term strategic relationship between both countries. Both navies have, over the years, undertaken diverse bilateral activities such as training exchanges, information exchange, and technical cooperation.

"Our nations have significant convergence of interests, especially in the maintenance of maritime security," said a statement released by the Indian Navy.

The annual Malabar series of exercises commenced in 1992. Thirteen such exercises have been held so far.

Navy Seeks Better Data Link Systems For Submarine Sonar Arrays

By Cid Standifer, Inside the Navy, April 26, 2010

The Naval Undersea Warfare Center wants ideas for flexible data connection designs for submarine sonar arrays that can handle a larger number of channels between arrays and their inboard processors, according to a broad agency announcement posted earlier this month on Federal Business Opportunities.

According to the posting, the Navy is looking for innovative telemetry designs that emphasize open architecture and require minimal changes to accommodate multiple hull arrays. The system has to work for medium frequency arrays used for long-range passive detection and submarine flank arrays, as well as high-frequency arrays such as those that provide short-range situational awareness that helps avert collisions and those mounted on submarine sails. The system must be able to handle anywhere from a handful to tens of thousands of channels.

"Submissions should emphasize open systems/commercial standards," the BAA states, "as this adaptable telemetry will be integrated with multiple domestic vendor and/or foreign-sourced acoustic sonar arrays and inboard processors."

The BAA asks for a telemetry system that can detect a wide decibel range with each sensor and minimize overall noise while preventing a noise buildup across channels from affecting readings. The design should also combine as many data links as possible to minimize how many openings must be made in the submarine's hull for connections, but must also allow for the data links to be split in case the array layout makes multiple hull penetrations the best option. The telemetry equipment must be small enough to fit behind the sonar array without increasing the submarine's profile. The BAA estimates that that allows one cubic inch of space for each channel — not including connectors and packaging — but says that the Naval Undersea Warfare Center is aiming for half that.

The Navy wants a system that is durable enough to survive extreme conditions and go from being exposed to the open air to submersion in water at a drastically different temperature without suffering damage. Specifically, the BAA says that the system must be built to survive the thermal shock of a transition from air temperatures of 40 degrees Celsius below zero to water that is three degrees Celsius above freezing, and from 75 degrees Celsius air to 15 degrees Celsius in water. When consistently submerged in water, the system has to function well between 3 degrees and 43 degrees Celsius, and function for five hours in temperatures above that. In addition, the telemetry must be built to handle explosive shocks and normal submarine vibrations.

The BAA includes a section on total ownership costs, asking that contractors address sensor channel costs, module costs and logistics needs, as well as minimizing time between failures, allowing fault localization through built-in tests, and including mechanisms that allow speedy recovery from glitches.

"Performance tradeoffs within and between areas should be considered," the BAA states. "Submissions should also address a detailed design that conforms to the proposed telemetry architecture to demonstrate a specific hull array application."

The contract would include a base period for the conceptual development of a system and include three option periods that would potentially take the system through installation on a submarine and at-sea tests. Proposals are due on June 22. There may be multiple cost-plus-fixed-fee awards.

Noise Russian Submarine Passed State Tests

Combat Fleet of the World, April 22, 2010

A new low noise diesel-electric submarine of the fourth generation "of St. Petersburg" Project 677 "Lada" passed the state tests, reports ITAR-TASS. As expected, the submarine will be incorporated into the Russian Navy in early May 2010. Earlier it was reported that "St. Petersburg" will begin trial operation in August and September this year.

Walker's World: Lone Ranger Losing Tonto

By Martin Walker, United Press International, April 26, 2010

WASHINGTON - Britain's general election has become one of those moments when life imitates art, or at least, when international politics follows a script from the movies.

The Silent Sentinel May 2010

Nick Clegg is the leader of Britain's third party, the long-derided Liberal Democrats, who has electrified the election by leaping forward in the televised debates and opinion polls to be at level pegging with the Conservatives and pushing Labor into third place.

This isn't only dramatic for the future of British politics but it could have a profound impact on international relations and United States foreign policy and U.S. relations with Europe as a whole.

Cut to the movie "Love, Actually." It was released for Thanksgiving weekend in 2003 and it took in \$80 million at the U.S. box office, double its production costs. It went on to make another \$190 million worldwide, which means it was a considerable success.

It starred Hugh Grant in the role of a British prime minister, young and engaging and very like Tony Blair, except that he didn't go along with the "special relationship" with the United States that had been the bedrock of British foreign policy since World War II.

And Clegg, then an ambitious young member of Parliament, took thoughtful note of the way British cinema audiences, deeply restive at Britain's role in U.S. President George W. Bush's invasion of Iraq, cheered at one prime ministerial speech with the fictional U.S. president in the room to hear this take on the "special relationship."

"I love that word 'relationship.' Covers all manner of sins, doesn't it?" the speech begins. "I fear that this has become a bad relationship; a relationship based on the president taking exactly what he wants and casually ignoring all those things that really matter to Britain.

"We may be a small country, but we're a great one, too. The country of Shakespeare, Churchill, the Beatles, Sean Connery, Harry Potter, David Beckham's right foot. David Beckham's left foot, come to that.

"And a friend who bullies us is no longer a friend. And since bullies only respond to strength, from now onward I will be prepared to be much stronger. And the president should be prepared for that."

And now cut back to reality, to a speech that Clegg gave this month to the Foreign Correspondents' Association in London.

"I think it's sometimes rather embarrassing the way Conservative and Labor politicians talk in this kind of slavish way about the 'special relationship," Clegg said. "If you speak to hard-nosed folk in Washington, they think it's a good relationship but it's not the 'special relationship.""

Cut to reality again, this time to a Clegg speech in March to Chatham House, the British foreign policy think tank (Disclosure: this columnist is on the review board of its quarterly journal).

"Let me be clear," Clegg began. "I'm an Atlanticist much like everyone else. I spent a happy time working in the United States. I think it is vital to our interests that we maintain a positive, strong and even uniquely warm relationship with the United States. But it is not our only relationship and it mustn't become a relationship that at every junction, every time a decision is made we have no choice but to follow the decisions made in the White House. And yet that seems to have been happening with greater velocity and frequency in recent years rather than less."

Britain has for 70 years been the closest and most reliable and also most powerful ally of the United States. It had the largest contingents of non-U.S. troops in both Iraq wars and in Afghanistan. It hosts U.S. military bases and is by far the largest foreign investor in the United States — there is more British investment in Texas alone than all Asian investment in the United States combined. The countries cooperate closely on almost all international and most financial issues.

The cooperation is uniquely strong between the intelligence services of the two countries and at the level of nuclear weapons, where the United States has provided the hardware of the Polaris and Trident submarine missile systems that have embodied Britain's nuclear deterrent forces for nearly 50 years. And now a leading theme of Clegg's policy is not to renew the Trident missile system and to replace it with some variant such as British-built cruise missiles launched from British submarines.

"I believe there is no case for the like for like replacement for that (Cold War Trident missile) system. And I believe one of the reasons there is a deafening silence on that issue is because that missile system is cemented by a sense of indebtedness to our American friends," Clegg said in that Chatham House speech. "Our strategic interests will not be served unless we release ourselves from that spell of default Atlanticism which has prevailed so strongly since Suez."

Scan his party's election manifesto in vain for any mention of NATO. Instead, he is a passionate pro-European who wants Britain to join the euro currency. He is an equally passionate internationalist who believes in global government. Again from his Chatham House speech, "Globalization requires us to formulate a system of supranational governance capable of controlling forces which escape the limitations of the nation state."

Clegg is most unlikely to become prime minister. But he is almost certain to become the kingmaker of the next British government, with very great influence on its policy. The long-standing American assumption of automatic British support for its policies is now in question. Batman is losing Robin. Don Quixote may look in vain for his trusty Sancho Panza. The Lone Ranger can no longer count on Tonto.

Sailors Decry Neck Measure As Unfair Gauge Of Body Fat

By Andrew Tilghman, Navy Times

It's all about the neck.

That's the key to passing the Navy's body fat tape test – but it's also what makes it unfair, according to many sailors and officers.

Lt. Cmdr. Sean Maxwell said he has a small neck and risks failing even though he's not fat.

Information Systems Technician 1st Class David Sanchez said working out and eating healthy backfired because he lost too much weight in his neck – and now the Navy says he's fat.

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And Machinist's Mate 2nd Class (SW) Keith McCue said he failed a body fat test when the guy checking the circumference of his neck cinched the tape too tight.

"The tape was tight around my neck where I couldn't even breathe," McCue said.

Concerns about the Navy's body fat standards – and the way they're enforced – have intensified since the service announced this month that, starting July 1, sailors who fail the assessment will no longer receive a waiver if they do well on the exercise portion of the test.

The change reverses a 5-year-old waiver, enacted because "people come in all shapes and sizes and we recognize that," then-Chief of Naval Personnel Vice Adm. Gerry Hoewing said at the time.

Some sailors suspect the rule change has nothing to do with health and fitness.

"What, is retention too high? Is that the real reason? Ridiculous," said Sonar Technician (Submarine) 1st Class (SS/IUSS) Ryck Thompson.

When asked about reasons prompting the policy change, Navy personnel officials did not cite retention as an issue.

"The exemption affected a relatively small number of members and is not seen as necessary to maintain mission readiness," personnel officials said in a statement. Other sailors support the stricter rules.

"We should not have fat slobs in our Navy," said Aviation Electronics Technician 3rd Class Aaron Pitts.

Navy Times asked readers for their opinions on the issue and received more than 50 e-mail responses, the majority of which fault the body fat assessment and complain that the waiver will no longer save those who otherwise do well on the semiannual physical readiness test.

The 'rope & choke'

Imposing body fat standards – 22 percent for men under 40 and 32 percent for women of the same age – has never been popular. But the waivers created in 2005 relieved some pressure, allowing about 800 sailors to get a pass each six-month testing cycle. Those sailors must score an "excellent" or "outstanding" on their PRT to receive the waiver.

Now, those numbers are far more likely to end your career. A sailor who fails the body composition assessment fails his overall physical fitness assessment, regardless of how he does on his PRT.

And three failures in four years will get a sailor kicked out of the Navy.

The problem with the tape measure test, often called the "rope & choke," is that the calculation involves subtracting neck circumference from waist circumference, so a bigger neck allows for a bigger waist.

The method itself tops sailors' list of complaints.

"The Navy's rules for measuring the body fat standards are so out-dated and inaccurate that it feels like the Navy is just being cheap and lazy," said Hospital Corpsman 1st Class (FMF) David Easterwood.

Experts agree that the tape measure method is among the least reliable, with a margin of error of 3 percent to 5 percent, said Jeffrey Groh, an exercise and health consultant for the International Dance and Exercise Association, one of the world's largest fitness organizations.

That means a sailor whose test shows 20 percent body fat could be anywhere from 15 percent to 25 percent.

Other tests have a margin of error of 2 percent to 4 percent, including the "skin-fold test" that uses hand-held calipers or newer devices that use electrical currents.

Several officers and sailors suggested that the Navy change to a skin-fold test, but the Navy is opting to stay with the tape test. The most accurate tests require submerging a person in a water tank and measuring his displacement. But that solution is widely viewed as costly, time-consuming and inconvenient.

Enforcement

Another complaint involved pay-grade enforcement, and the notion that chiefs and officers get a pass on the tape test. According to Navy statistics, 28 captains or above failed a body fat test during the spring 2009 cycle. In the goat locker, 403 chiefs, senior chiefs and master chiefs failed the test in that same period, Navy Personnel Command statistics show.

Yet many sailors believe that rules are not enforced for senior leaders.

"I am all for standards, but I really don't think it is followed by all ranks," said Logistics Specialist 2nd Class Robert Ellis.

"Standards and rules should be for everyone. I have seen people get hooked up and others get thrown to the wall."

Some sailors question the need for any test at all.

"Why does a sailor need to be within body fat standards? Can't a 260-pound sailor who does their job outstandingly be in my Navy? What about a 165-pound sailor who is lazy? Take the fat sailor and kick out the lazy one just like corporate America. Isn't that where we are heading towards anyway?" said Aviation Electrician's Mate 2nd class (AW) Adam Wood.

If retention is a factor motivating the Navy to tighten the rules, it wouldn't be the first time, said Bill Hatch, a retired commander who does research on manpower and training issues at the Naval Postgraduate School in Monterey, Calif.

"This is not a new concept," Hatch said.

"The weight standards have often been used to let poor performers go in years of high retention. Now, high retention has shifted the faucet in the direction of high-quality husky sailors. Let's just ensure we are not keeping poor performing sailors who are `in' weight standards at the expense of these high performers."

Submarine Group Remembers WWII Sacrifices

By Daniel Carson, NewsHerald.com, April 28, 2010

PANAMA CITY BEACH — It's been about 65 years since John Coleman served aboard the USS Lapon, but the Panama City resident still thinks about his days as a submariner during World War II.

Coleman was one of several World War II veterans in attendance Wednesday at the United States Submarine Veterans Inc.'s memorial service for U.S. submarines and personnel lost in the line of duty.

The group staged a "Tolling of the Boats" ceremony to honor the departed, with one of its members ringing a bell after another submariner read the names of U.S. submarines, including 52 in World War II, that were lost at sea.

"It's kind of touching," Coleman said after the ceremony, as he talked about his time spent in what he called "the silent service." The ceremony was part of the group's annual Southeast regional convention, held this year in Panama City Beach at the Sleep Inn & Suites and hosted by the locally based Seawolf Base chapter. Seawolf Base Commander Darrell Peugh said the convention, which started Sunday and ends today, welcomed about 100 submarine veterans from 11 different states.

Peugh said one of the objectives of U.S. Submarine Veterans Inc. is to perpetuate the memory of the men who lost their lives while serving their countries.

Standing by a row of chairs reserved for World War II veterans like Coleman, Peugh said the more than 3,600 men who lost their lives aboard submarines during the war were considered to be on eternal patrol.

"They were civilians one day and at sea fighting a war the next. They deserve a lot of credit," Peugh said.

Naval Surface Warfare Center Commander Capt. Thomas Brovarone spoke at Wednesday's ceremony about the role U.S. submarines played during World War II in the Pacific.

Brovarone stressed that all of the U.S. military services contributed to the victory over Japanese forces. He quoted a note Fleet Adm. Chester Nimitz wrote to the American people after the war regarding U.S. submarine forces.

"We, who survived World War II and were privileged to rejoin our loved ones at home, salute those gallant officers and men of our submarines who lost their lives in that long struggle. We shall never forget that it was our submarines that held the line against the enemy while our fleet replaced losses and repaired wounds," Brovarone said, quoting Nimitz.

U.S. submarines sank 1,560 vessels carrying more than 5 million tons in merchant cargo, Brovarone said, as well as eight aircraft carriers and more than 200 enemy war ships. He said submarines launched commando raids, carried out shore bombardments and rescued more than 500 downed Allied airmen.

The USS Lapon (SS-260) sank 14 Japanese merchant ships and one destroyer, Coleman said. "Japan depended on everything to come to them by sea," he said.

Trident Replacement Threatened By Doubts Over Us Submarine Costs

By Rob Edwards, Caledonian Mercury (UK), May 3, 2010

The UK government's plans to replace Trident submarines could be thrown into disarray by growing doubts over their future in the US.

The US Defence Secretary, Robert Gates, is today expected to challenge the American Navy's plans to spend up to \$80 billion (£52 bn) on 12 new submarines to replace the existing Ohio-class boats which carry Trident nuclear missiles.

Because the UK programme is so dependent on the US, this could hugely increase costs and jeopardise Labour and Conservative promises to replace the Trident nuclear weapons system.

Gates is due to give a speech to a major US naval conference in Maryland. According to his aides, he will raise a series of questions about the Ohio replacement programme, due to commence in 2027.

Moves by President Obama to cut nuclear weapons globally, the economic crisis and competing naval programmes will all be cited, they say, as reasons for rethinking plans for future submarines.

The speech will be interpreted by observers as a direct challenge to navy chiefs. The message will be that, if they don't cut back their submarine programme themselves, cuts may be imposed upon them.

Gates has been blunt about the implications of the high cost submarine replacement programme in the past. "In the latter part of this decade, it will suck all the air out of the navy's shipbuilding program," he told a House of Representatives subcommittee in March. "Some tough choices are going to have to be made, either in terms of more investment, or choices between the size of surface fleets you want and the submarine fleets."

The submarine programme has also come under pressure in Congress. Gene Taylor, the democrat who chairs the influential seapower committee, last week threatened to recommend against funding it.

One big problem is that the estimated cost of the new US submarines has doubled. Three experts told a subcommittee of the House of Representatives Armed Services Committee on 20 January that the average cost of each submarine had risen from 3.4 billion (£2.2 bn) to between \$6 and \$7 billion (£3.9-£4.6 bn).

According to congressional sources, this was very likely to put up the price tag for replacing Trident submarines in the UK, estimated by the Ministry of Defence (MoD) as £11-14 billion in 2006. It was "highly improbably" that UK costs could now be kept that low, one expert said.

"Robert Gates is planning to cut the number of new US submarines," said John Ainslie, the co-ordinator of the Scottish Campaign for Nuclear Disarmament. "This will increase even further the amount the British taxpayer will have to contribute, because this is a joint Anglo-American project."

The cost of replacing Trident submarines would be "far higher" than the British government has admitted, he argued.

The new US and UK submarines are meant to share much of the same technology, including their Trident missile compartments, navigation systems and fire controls. The countries have also been working closely together to develop the kind of nuclear reactors that will power the submarines.

The revelation about Trident's escalating costs in the US was described as "devastating", by Angus Robertson, the Scottish National Party's defence spokesman and Westminster leader.

"The UK has never had a truly independent nuclear weapons system and any decision to scrap or even modify the US programme has massive cost consequences for the Ministry of Defence," he said.

"It is no surprise, given the squeeze on their defence budget and President Obama's desire for disarmament that the US Defence Secretary is considering scrapping the fleet. The London parties should wake up and realise the true costs of what they are proposing and scrap it all together."

The MoD has argued in the past that it would be able to build submarines cheaper than the US. Last week, it declined to comment.

US Spy Submarine 'May Have Sunk Bugaled Breizh' - Claim

Western Morning news (United Kingdom), May 3, 2010

An American nuclear attack submarine engaged in a covert anti-terrorist spy mission may have been responsible for the January 2004 sinking of the French trawler Bugaled Breizh and the deaths of her five crew off the Lizard.

The spy sub may have been lurking in the western Channel reconnoitring the route of a huge consignment of military grade plutonium shipped from the French port of Cherbourg to Japan on board a British nuclear transport vessel four days after the Bugaled sank, according to a French expert.

The spy sub theory is the brainchild of former submariner Admiral Dominique Salles who submitted a report this weekend to judges investigating the accident. In a previous report M. Salles said the French trawler was 'most probably' sunk by a submarine.

Judges commissioned him to make further enquiries and report back this spring.

Monsieur Salles now recommends French judges in Rennes press the US Navy to reveal the positions of all of their nuclear attack subs on January 15, 2004 to identify the US submarine which, he says, possibly snagged the Bugaled's trawl and dragged her down in less than a minute.

Previously judges in Quimper wrote to grieving families telling them European navies had 'hidden behind red tape' and dragged their heels in supplying submarine documents.

In his first report on the tragedy Monsieur Salles said it was 'highly probable' a nuclear attack submarine was responsible as only an underwater vessel with such power could have dragged the Bugaled down so rapidly.

In his latest findings Monsieur Salles claims the US Navy was worried about the possibility of terrorists attacking the British nuclear transport vessel Pacific Sandpiper which was due to transport a cargo of plutonium from Cherbourg to Japan on January 19.

The plutonium had been reprocessed at Cap de la Hague on the Norman coast where the world's largest stockpile of nuclear waste and high-grade military plutonium is stored.

British nuclear transport vessels which take plutonium from La Hague are armed with 40mm cannon and protected by on-board squads of machine gun-toting guards.

But according to sources who spoke to Monsieur Salles the US did not trust British and French anti-terrorist security and may have sent one of its own nuclear subs to the Channel to keep an eye on the nuclear transporter and make sure its cargo didn't fall into the wrong hands.

Since the Bugaled Breizh sank families of the victims and the authors of a book on the tragedy have pointed accusing fingers at both the British submarine HMS Turbulent and the Dutch sub Dolfjin, which were both in the western Channel.

Thursday war games took place on the January 15 2004, the day of the tragedy and a NATO exercise began on the 16th. British, French, Dutch and German navies have all claimed they cooperated with French judges and denied that any of their submarines were responsible.

But last year judges in Quimper wrote to grieving families telling them that European navies had 'hidden behind red tape' and dragged their heels in supplying submarine documents.

A British inquest into the deaths of the fishermen is due to open if and when the French investigation concludes.

Indian Ocean Overrun With AIP Boats

Strategy Page, May 4, 2010

Pakistan is having AIP (air independent propulsion) added to its third Agosta 90B submarine. One of the Agostas was built with AIP, and the second has had it installed. AIP enables the sub to stay under longer, thus making the sub harder to find. AIP allows the sub to travel under water for 4-5 days at low speed (5-10 kilometers an hour).

Meanwhile, Pakistan is switching from France to Germany for its next batch of submarines, and is buying three Type 214 diesel electric submarines. Two years, Pakistan completed building the last of five Agosta subs, with the assistance of the French designers.

The 214s will be built in Pakistan, and the first one will be in service in about four years. The Type 214 is a 1,700 ton, 202 foot long boat, with a crew of 27. It has four torpedo tubes and a top submerged speed of 35 kilometers an hour. Maximum diving depth is over 1,200 feet. The Type 214 is similar to the earlier Type 209 and Type 212. The Type 214 also has a air-independent propulsion (AIP) system. This enables the sub to stay underwater for over a week at a time. Pakistan is paying about \$350 million per sub.

The main undersea adversary for the 214s will be six French Scorpene class diesel-electric submarines being built in India. These are similar to the Agosta 90B subs that Pakistan has just finished building. The two designs are similar, with the Scorpene being more recent (and the result of cooperation between a French and a Spanish firm.) The Agosta is a 1,500 ton (surface displacement) diesel-electric sub with a 36 man crew and four 21 inch torpedo tubes (with 20 torpedoes and/or anti-ship missiles carried.) The Scorpene is a little heavier (1700 tons), has a smaller crew (32) and is a little faster. It has six 21 inch torpedo tubes, and carries 18 torpedoes and/or missiles. Both models are usually equipped with an AIP.

With both nations having these modern subs, they have very lethal weapons against surface warships. With well trained crews, 214s, Agostas and Scorpenes can get close to just about any surface ship, no matter how good the defenders anti-submarine defenses are. But it's the AIP boats that are the real killers. Without AIP, subs spend most of their time just below surface, using their diesel engines (via a snorkel device that breaks the surface to take in air, and get rid of the engine exhaust.) Snorkels can be spotted by modern maritime patrol aircraft, and both nations are getting more of these.

India is getting its first Scorpene in 2015, with one a year after that. Only the last three will have AIP. The price of the contract is quoted as \$300 million for each boat. That could include AIP, because the boats are being built in Indian yards, which have much lower costs. European built AIP boats go for about half a billion dollars each. Typically, AIP adds about \$100 million to the cost of a sub.

Iran Navy Launches Massive Maneuvers

Ahlul Bayt News Agency, May 6, 2010

The Iranian Navy has started eight-day military maneuvers in south of the country.

The naval forces are scheduled to conduct the military exercised in the east of the Strait of Hormuz and the Sea of Oman and northern Indian Ocean, covering an area of 250,000 square kilometers.

Units from Iran's air force and ground army have also taken part, as well as submarines.

The naval forces will use a wide range of weapons, warships, frigates and submarines to show readiness in case of a foreign military threat.

Naval commander Habibollah Sayari in an interview with Al-Alam on Tuesday had announced the maneuvers.

Rear Admiral Sayyari said: "The exercise is to show Iran's might in southern high seas, its full control of shipping in the region to provide ... safety in confrontation against terrorism and piracy.

He added: "Iran stands very serious against threats."

Iran's armed forces regularly conduct military drills to boost the country's defensive abilities.

The drill comes a week after the Iranian Revolutionary Guards Crops conducted massive exercises in the Persian Gulf. The drills involve launch of new weapons.

Women On Pearl Subs Unlikely For Now

By Gregg K. Kakesako, Honolulu Star-Bulletin, May 7, 2010

There are no immediate plans to modify the 17 attack submarines assigned to Pearl Harbor to accommodate female officers because the Navy plans to allow the first U.S. women to serve aboard larger submarines.

Changes will be limited to the larger nuclear guided-missile and ballistic-missile subs assigned to Kings Bay, Ga., and Bangor, Wash., said Lt. Cmdr. Dave Benham, Pacific Fleet Submarine Force spokesman.

"That is because this class of submarine has the most living space," he added.

The Ohio-class ballistic-missile submarines—often referred to as "boomers"—at 560 feet are three times larger than the 360-foot Los Angeles-class attack submarines and 12 times larger than the World War II diesel submarine USS Bowfin.

Only Ohio-class submarines will have female officers on board. That includes four of the older models that have been modified so that two of the sub's 24 missile tubes can launch and recover Navy commandos.

The decision to limit sub duty to female officers serving on boomers skirts the cost and problems in modifying smaller Los Angeles- and Virginia-class boats to have separate bunks and bathrooms for enlisted men and women. Enlisted sailors make up about 90 percent of a sub's 160-sailor crew. No time line was given for integrating enlisted women onto subs.

The Navy ended one of the few remaining gender barriers yesterday by lifting the restrictions against women serving on submarines. Despite lifting the ban against women serving on its surface vessels in 1994, the Navy kept female sailors off submarines because of the problems of cramped quarters and privacy issues.

Navy officials said the first female submariners will report for duty by 2012.