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



The Silent Sentinel May 2011

Non-Profit Org. U.S. Postage Paid Permit No. 445 Chula Vista, CA

RETURN SERVICE REQUESTED





Our Creed and Purpose

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

In addition to perpetuating the memory of departed shipmates, we shall provide a way for all Submariners to gather for the mutual benefit and enjoyment. Our common heritage as Submariners shall be Strengthened by camaraderie. We support a strong U.S. Submarine Force. The organization will engage in various projects and deeds that will bring about the perpetual remembrance of those shipmates who have given the supreme sacrifice. The organization will also endeavor to educate all third parties it comes in contact with about the services our submarine brothers performed and how their sacrifices made possible the freedom and lifestyle we enjoy today.

LATE BREAKING NEWS: Now this is a real, honest to goodness, Flash Message.

OSAMA BIN LADEN DEAD

Congratulations to Seal Team 6 for a Job Well Done!

U.S. Submarine Veterans San Diego Base

Base Commander

Bob Bissonnette 1525 Walbollen Street Spring Valley, CA 91977 (H) 619-644-8993 (CELL) 619-251-7095 RBisson250@aol.com

Senior Vice Commander

Bill Earl 2251 Vancouver Ave San Diego, CA 92104-5350 619-2804053 dinkysan@yahoo.com

Junior Vice Commander

Jim Bilka 563 Broadway, Apt 62 El Cajon, CA 92021 619-277-5758 sashanman@yahoo.com

Secretary

Manny Burciaga 8406 Alado Place El Cajon, CA 92021-2003 619-921-5877 MannyBurciaga@pointloma.edu

Membership -- Change of Address

Ron Gorence 2563 Roseview Place San Diego, CA 92105 Home--(619) 264-6995. Cell: (619) 264-3327 mgorence@yahoo.com

Newsletter Editor

Mike HYMAN 3639 Midway Drive, B-320 San Diego, CA 92110-5254 (619) 980-0846 stamps@fortunesofwar.com

Base Storekeeper

Phil Richeson Phillip92071@aol.com 619-922-3230

Chaplain

CJ Glassford 4905 Coconino Way San Diego, CA 92117-2619 858-204-8323 "Cjtmatlarge@san.rr.com

Treasurer

David Ball 3804 Wildwood Road San Diego, CA 92107-3750 619-225-0304 davidball@cox.net

Assistant Editor/Photographer

Jack Kane 619-602-1801 jkane32@cox.net

Chief of the Boat

Fred Fomby 858-735-0026

Assistant Chaplain

Chris Strows cstrows@gmail.com 619-708-2675

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.

NAME:		
ADDRESS:		
CITY/STATE/ZIP:		
EMAIL:		
TELEPHONE:		
Would like the SILENT SENTINEL emailed: VES	NO	

Robert Bissonnette 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 next meeting will be on 10 May, 2011. 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 Bob Medina Don Philpot

Charlie Marin visited Don Philpot last week. Don is under hospice care. He was in good spirits and reconciled to his condition If you want to visit, please call ahead. The number is 619-224-1109

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 Chaser, Off Northern Honshu, Japan : "ALL HANDS LOST"

GRENADIER (SS 210) - 80 Men on Board:

Scuttled, on 22 Apr 1943, after Japanese Seaplane Attacks

Damaged the Boat the previous day, off Penang,
Malasia:

"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"

Naval Aircraft, Escort Vessel, Coast Defense Vessels,

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, on 10 April 1 963, 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"



Submarine Veterans Inc., San Diego Base minutes for 12 April 2011

1902 – Meeting called to order by Base Commander, Bob Bissonnette.

Conducted opening exercises:

Reading of our Creed.

Pledge of Allegiance lead by Bill Earl.

Chaplin led members in prayer.

Conducted Tolling of the Boats for the month of April

USS S-49(SS160) 20 APRIL 1926 4 MEN LOST

USS PICKEREL(SS177) 3 APRIL 1943 ALL HANDS LOST

USS GRENADIER(SS210) 22 APRIL 1943 4 MEN LOST

USS GUDGEON(SS211) 18 APRIL 1944 ALL HANDS LOST

USS SNOOK(SS279) 3 APRIL 1945 ALL HANDS LOST

USS THRESHER(SSN593) 10 APRIL 1963 ALL HANDS LOST

USS BONEFISH(SS582) 24 APRIL 1988 3 MEN LOST

A moment of Silent Prayer observed.

E-Board Members, VIP's and guests honored.

Secretary reported that 35 members are present.

Treasurer's report – The organization has \$21,247 in our account.

Chaplin- There is no additions to the binnacle list. Please let me know if you have any additions to the list.

Membership – We presently have 332 members listed.

Parade Committee – Parade schedule for the year.

November 11, 2011- Downtown San Diego will be very large with large active duty participation. We will be using the float. If you would like to volunteer to help organize this event let me know.

July 4, 2011 – Julian Day Parade in Julian.

June 4, 2011 – La Mesa parade.

This coming Saturday April 16 we are planning to attend the Linda Vista parade.

We need a volunteer with a truck to pull the float. (Fred Fomby volunteered) A

show of hand was requested for how many will be at the parade. Seven members raised their hands.

Scholarship Committee – Any new applications will be submitted for next year.

Storekeepers report - We have the new Blue Nose patch or the 90 north crew patch for sale. I have some pen and ink drawings that are for sale at \$25.00 each.

They are very good, come a take a look during the break. There is a catalog

along with hats and some other items in the back of the room.

Breakfast – May 29, 2011 at 0800 will be the next Sub base breakfast. Come on out and bring your family and friends. We still need some volunteers to help serve

and help with the food. There will be a food handler's class here at the VFW on 23 of April at 0900.

1926 – Base Commander call a 10 minute break.

1935 – Meeting called to order by Base Commander.

Unfinished Business – Eagle Scout program – Instructions for setting up the program was given to two members who volunteered for the program. Base Commander requested they read the instructions and next meeting present the information so the base membership can vote on what funding for the program may be need.

Kaps for Kids – Base Commander has a DVD on the program and how to set one up. This program can provide much publicity for the Base and do a lot of good for the kids. I have some contacts at Balboa Hospital which may be helpful.

See me after the meeting if you would like to help set up the program.

Submarine Birthday Ball set for May 28, 2011 at 1700. This is the Memorial Day weekend. The Ball will be held at the Hilton Bayside. Cost is \$60.00 per person.

Formal Dinner dress uniform or appropriate civilian attire. If you are interested in

attending contact: Rick Morris, 619 553 7757 or Vega Cruz, 559 9110 or Chief Eaton, 553 8577.

Holland Club by-laws change: Base Commander read the change to the membership. A motion was made for the proposed changes. A discussion among

the membership took place. Motion made to accept by-laws change, Called for

yea and nays, passed by majority vote.

New Business – No new business by the Base Commander.

A member who is involved with the La Mesa Day parade informed the group that the parade was for the benefit of Police and Fireman, and it cost 50k to put on the

parade. He requested we donate 100.00 dollars to the La Mesa Parade committee to

help with the parade. A motion was taken and passed to donate 100.00 dollars to help with the La Mesa Day parade.

Webmaster pointed out the copy of the by-laws on the website is out dated and wanted to know if we had an updated version. Base Commander said he thought he might have a copy of the latest version of the by-law. He will check and bring the copy to next months meeting for review and then submit them for the

website.

Good of the order – Ron Gorence had some business cards with our Sub base information on one side and your personnel information on the other side. Base

Commander thought this might be a good recruiting tool if the membership would

be interested in getting the cards.

CJ requested that he would like to seek a volunteer Chaplin to assist and eventually take over as Base Chaplin. He will give you all the material you need to do the job.

Ray informed the group that a Virginia Class boat will be visiting San Diego soon and Squadron eleven will assist us in getting a tour of the boat. He will have more

information as the arrival time approaches.

Jack informed the membership that the National website now can provide pictures of individual to be posted on the site. Next meeting he can take pictures of anyone

who would like their pictures sent to the national website.

2010- Having no further business the Base Commander called the meeting adjourned.

SAILING LIST

FRED FOMBY JACK ADDINGTON **BILL EARL JOE DUBOIS BEN ROLLISON DAVID BALL BOB BISSONNETTE GLENN GERBRAND** JACK KANE **DENNIS MORTENSEN ROY BANNACH** MANNY BURCIAGA **RONGORENCE BOB FARRELL JOEL EIKAM RUSS FILBECK** STEVE LAMPRIDES **CHARLIE MARIN** NIHIL D. SMITH PHILL RICHESON **CHARLES SIMMONS DAVID KAUPPINEN JOEACAY EVERETT MAUGER RAY FERBRACHE** MATT BAUMANN **MIKE HYMAN** CJGLASSFORD MIKE COSGROVE **EDFARLEY BOB OBERTING HARRY MCGILL KURT GREINER** MERT WELTZIEN TOM WARNER

Linda Vista Parade



Charlie Marin







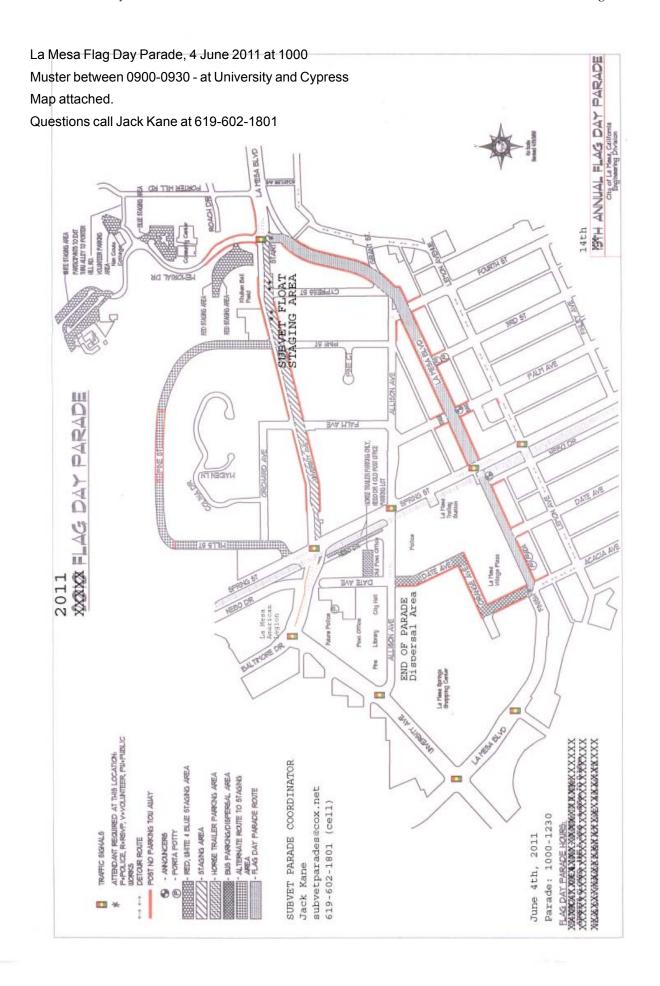
Ed Farley Signals Start of Parade





Miss California 2010





Missing For Decades, World War II Sub's Lost Bell Surfaces

By Kate Wiltrout, The Virginian-Pilot, April 26, 2011

Rhonda Savage was always curious about the brass submarine bell.

Inscribed "U.S.S. Triton," it was the centerpiece of a handmade, glass-topped end table in a relative's home near Reno, Nev. Visitors weren't supposed to ring it, but sometimes they couldn't help themselves. The shiny artifact beckoned.

Thanks to Savage's curiosity, the 14-inch diameter bell - technically government property, missing for more than four decades - is once again in proper hands.

An Internet search Savage did last month turned up a 2-year-old Virginian-Pilot story about the missing Triton bell and the efforts of former crew members to find it. Within days, Savage, who lives in Bakersfield, Calif., had gotten in touch with Harold Weston in Virginia Beach.

Weston, 79, is a retired master chief petty officer who served as chief of the boat on the second Triton, a nuclear-powered sub that in 1960 became the first submerged vessel to circumnavigate the Earth.

He had been searching for the bell for years. It had special significance because it came from an earlier submarine named Triton that was sunk by the Japanese in the Pacific Ocean in March 1943, with 74 crewmen aboard.

The first Triton didn't have its original bell when it sank. According to lore, the U.S. Navy removed them all after the attack on Pearl Harbor. That lessened the risk of a bell accidentally ringing and giving away the sub's position to enemy ships.

That made the bell a powerful symbol for Weston's Cold War crew. When the nuclear submarine reached the vicinity of the Admiralty Islands, near where the first Triton likely was sunk, the crew fired three water slugs, simulating live torpedoes, in salute. They tolled the original bell, now with the second Triton, to honor the Triton sailors who never came home.

Jeanine Allen, who was 3 years old in 1943 when her father died aboard the Triton, has long wanted to see the bell. She's certain her father, who was a chief torpedoman's mate, touched the bell many times during his service aboard the submarine. She wanted to touch it, too.

Reading about Allen, Savage knew she had to get the bell back to the Navy. She contacted Weston and told him retrieving it might be tricky. Its owner, a former Navy reservist who served aboard a submarine tender in the 1960s, might not be willing to part with it. And she didn't want him to know she was the one who'd revealed the bell's location.

Weston didn't care how the man had come into possession of the bell; he just wanted it back. So he and a retired admiral who'd once served on the Triton drafted a letter to Savage's contact. We know you have the bell, they wrote. It's government property. Please return it so it can be displayed in the Triton barracks at Great Lakes Naval Station in Illinois.

The man agreed to give up the bell. On Saturday, Robert Rawlins, a former Triton commanding officer, drove from his Northern California home to the outskirts of Reno to retrieve the bell.

He will hold it until next year's Triton reunion, then ensure it's displayed at Great Lakes, where enlisted sailors go through boot camp.

"The opportunity these people will have to actually see the bell for the first time, and to be able to touch a piece of history, is just an amazing thing," Savage said. "You can't really put it into words; there's going to be so much emotion. I'm just glad it's going to be going home, and it's going to be in the right hands."

Weston couldn't be happier. He hopes Savage will attend next year's reunion as an honored guest. And he can't wait to watch Allen finally rest her fingers on the same cold brass that her father touched decades ago. "My efforts were for her," Weston said.

'Iran Can Terrify Enemies From Under The Sea'

Press TV, April 25, 2011

Commander of the Islamic Revolution Guards Corps (IRGC) says Iranian submarines will engage in asymmetric warfare against enemy vessels in the Persian Gulf in the event of an aggression.

"The new equipment (submarines) are smaller and faster under water and operate similar to our small speedboats, which terrify our enemies on the surface," Mohammad-Ali Jafari said in an interview with Fars News Agency on Monday.

Jafari said the IRGC is not seeking to build large submarines that are easily targetable for enemy forces and reiterated the Guard's asymmetric combat strategy.

The brigadier general said that the country's enemies are aware of their vulnerability in the Persian Gulf and are likely to move their forces out into the Indian Ocean before launching a strike against Iran.

"We are trying to increase our operational range and reach enemy vessels there [in the Indian Ocean]," Jafari concluded.

Earlier this month the Iranian military's navy announced plans to manufacture and deploy a new 500-ton submarine that is larger than the Ghadir submarine.

The 120-ton Ghadir submarines joined the Iranian naval fleet in 2007. The Islamic Republic navy is believed to be operating more than ten of the light-weight subsurface vessels, primarily in the Persian Gulf and the Sea of Oman.

In recent years, Iran has made important breakthroughs in its defense sector and attained self-sufficiency in producing important military equipment and systems.

The Islamic Republic has repeatedly assured that its military might poses no threat to other countries, stating that Tehran's defense doctrine is based on deterrence only.

U.K. Posts Sensitive Details About U.S. Subs

By Sam Fellman, Navy Times, April 24, 2011

The leakage of a few closely held facts about America's silent service comes from an unlikely source: its closest ally,

The secrecy gaffe can be traced to the British Parliament, which in April posted an advisory report about nuclear reactor safety in Royal Navy submarines on its website. The report, classified "Restricted," contained about two pages that had not been properly redacted, including some details about U.S. subs.

The report was written to help U.K. defense officials choose a propulsion plant for the Royal Navy's next generation of ballistic subs. Parliament staff, responding to an open records request, blacked out sections of the document electronically, but left the text itself underneath. As a result, anyone could copy and paste the block of text into another document and see what was covered up, the Daily Star Sunday reported April 17. (The U.K. Ministry of Defence told the publication it was "grateful" for the notification.)

The report was taken down, correctly redacted and re-posted, but other websites subsequently posted the original item. Navy Times is not publishing the quotes, but in general terms, the report concludes that Royal Navy subs fall short of best practices in two of the worst casualties in a nuclear-powered sub: loss of the reactor's primary coolant and loss of ship control.

In the worst-case scenario, a reactor loses its cooling water, perhaps from a leak, or the power to cool the water, causing the fuel rods to overheat. This situation is akin to the partial meltdown at the Fukushima Dai-ichi plant in Japan after an earthquake and tsunami disabled the plant's electrical

British subs are twice as likely to suffer reactor coolant leaks as American subs, according to a redacted portion of the report. This is attributable to the design of the reactor and the coolant injection systems.

Existing designs of civilian power plants have systems for safely injecting coolant into the reactor pressure vessel and passive core cooling systems, the report notes in a nonredacted section. In a redacted passage, it says American subs have comparable safety systems, built to withstand their environment. The redaction ends, and the report then says that "UK submarines compare poorly with those benchmarks."

The report does not detail those systems on U.S. subs. But the hazard from a meltdown on a British submarine could be severe.

While the further containment provided by the submarine's pressure hull may contain the majority of this [highly radioactive fission] material inside the submarine," the report says in nonredacted section, "some leakage is likely to occur and in any event the radioactive 'shine' from the submarine poses a significant risk to those in close proximity and a public safety hazard out to 1.5km from the submarine."

Loss of power in a reactor casualty also affects the safety of the sub. When the submarine's reactor is unexpectedly shut down, emergency diesels start up to provide power to the sub, including sub control systems such as the planes, propeller shaft and rudder, which control the depth and speed.

Again, U.S. subs fare better than their British counterparts, according to the report. American procedures stipulate "a high reliability of propulsion," even during reactor faults, as compared with British subs, it says in a redacted section.

Still, vulnerabilities exist for U.S. subs. One such area, referred to obliquely in the redacted section of the report, is the fact that the subs have only one propeller shaft.

Because propulsion systems are still vulnerable to faults along a single shaft, the report says in a redacted portion, it recommended further study of propulsion systems for future designs of British ballistic subs. The report does not detail the risks arising from having only a single propeller shaft.

In response to questions from Navy Times, Thomas Dougan, a spokesman for Naval Reactors, said the leaked report only focused on Royal Navy subs. "U.K. Royal Navy submarines operating today are safe and designed to high standards of reliability using a defense in depth approach," he wrote in an email. "The features discussed in the [defense nuclear safety regulator] report would only serve to further build upon the U.K.'s outstanding track record of safe operation of nuclear-powered submarines."

Dougan declined to address questions about reactor safety on U.S. subs, including questions about important safety systems such as coolant injection and emergency generators.

"The details of U.S. reactor designs," he wrote, "are militarily sensitive."

Most Speakers Say Explosives Handling Facility Is A 'Cold War Relic'

By Greg Skinner, Kitsap Navy News, April 22, 2011

POULSBO — The general consensus of those who spoke at Tuesday's public meeting about a second explosives handling wharf at Naval Base Kitsap Bangor was that the project just isn't necessary in the post-Cold War world.

Navy officials listened and took note of the comments at the meeting at North Kitsap High School, Naval Base Kitsap Bangor maintains one of the largest stockpiles of sea-launched nuclear weapons in the national magazine. A second explosives handling wharf would cost about \$750 million, take four years to complete, and would have some negative environmental impact on Hood Canal in the vicinity of Bangor.

For decades, expanding the explosives handling capacity at Bangor has been on the Navy's collective mind. In 2009, the Navy restarted the Environmental Impact Statement required before permits can be filed with state and federal agencies.

March saw the release of the draft EIS and the beginning of the 45-day public comment period, which ends on May 2. A final decision is expected by late fall and construction could begin in 2012.

The Navy says the eight Trident submarines and their complement of Trident II D-5 missiles require the equivalent of 400 days each year of maintenance and support. A second wharf would result in up to 730 days of available time.

The program looks to extend the D-5 missiles lifespan into the year 2042. "As (D-5 missiles) age, they require more and longer maintenance." project engineer David Gibson said.

Gibson said not all the available days brought about by the expansion would be used in direct support of the missile maintenance schedule. About operational days would be spent maintaining the wharf facility itself.

The Navy's preferred choice includes a 150,000-square-foot large-pile wharf, a 34,000-square-foot warping wharf, six 30-foot-tall lighting structures, and cranes to be constructed 600 feet offshore in water up to 95 feet deep and connected to shore by an 81,000-square-foot trestle.

"It's a large structure out there," Gibson said.

Charles Schmidt of Bainbridge Island testified that the Cold War ended more than two decades ago and the country would do well to move on from nuclear weapons designed to deter the former Soviet Union.

"There are not that many Russian subs out there," Schmidt said. "The threat is not there."

Schmidt said the wharf project would probably cost more than \$1 billion by the time it's completed.

"Dealing with the reality of government projects, it's tough to stop a project that is started," Schmidt said.

Brian Watson of Bremerton said the Navy was acting like it was 1975 and the Cold War was still on. The Navy has done a fine job for a decade servicing the eight missile submarines based at Bangor with the single wharf, and the Defense Department said no new wharf was needed until the number of subs ported at Bangor reaches 10, he said.

"The need doesn't add up," Watson said. "It's as if we anticipate more weapons."

Retired submarine officer Tom Rogers of Poulsbo left the Navy shortly before the Cold War ended in 1991. The end of the mission to deter Soviet aggression and nuclear war was the highlight of his career. Still, Rogers asked the Navy to consider killing the project, which is one of the available options in the EIS. Rogers called the Trident program a "Cold War relic" that was expensive and barbaric.

"The continued use is an unmistakable sign that we are not ready to give up nuclear weapons," he said.

Kitsap County Commissioner Rob Gelder, D-Poulsbo, said the project was generally favored by county authorities for the jobs that would be created. He said that support would remain as long as the in-lieu fees program designed to mitigate environmental damage remained intact.

No responses were given at the hearing. Answers will be provided in the final EIS when finished.

Capt. Pete Dawson, commander of Naval Base Kitsap, and several civilians involved in the project listened to comments.

While doing nothing is an option, that's unlikely. Congress has approved the \$750 million for the construction of a second explosives handling wharf, and the D-5 missiles must be maintained.

The Suquamish Tribe has expressed concern that "industrialization" in Hood Canal's sensitive marine environment and Suquamish's fishing grounds will lead to habitat loss and diminished water quality.

"The tribe is concerned about the cumulative effects of this project when combined with past and future projects on or in the vicinity of the Bangor waterfront," Tom Ostrom wrote for the Suquamish Tribe. "The Navy's actions are resulting in an increasingly industrialized shoreline adjacent to the sensitive Hood Canal marine environment."

The Navy's draft for the preferred choices shows that habitat for endangered and non-endangered species will be affected if the project goes forward. According to the Navy, the economic benefits of the project, regardless of alternative, will bring to the area about 100 temporary direct jobs during the construction and 394 indirect jobs associated with the nearly \$1 billion in federal money expected to be spent in Kitsap County.

Long term, the new wharf and longer operations hours are expected to employ about 20 additional people.

The Navy will host more public hearings in Seattle and Chimacum and accept written comments until May 2 via U.S. Mail or the website, www.nbkeis.com/EHW.

Irishman Who Invented The Submarine To Be Honoured

Irish Independent, April 23, 2011

THE Irishman who invented the submarine in the mid-1800s is to be honoured at a special event next month.

John Philip Holland, a teacher at North Monastery in Cork, started with wooden models, with small quantities of explosives. His second design was intended to sink a Royal Navy warship as part of the fight for Irish independence.

His designs eventually led to the first working submarines for the United States, British, Japanese and Dutch navies.

The John Philip Holland commemoration will be staged in the National Maritime College of Ireland in Ringaskiddy, Co Cork. It will feature a contribution from Bruce Balistrieri, who runs the Paterson Museum in the US, which is now home to the Irishman's first two submarines.

India Exacerbates Nuclear Woes

By Khan A. Sufyan, The Nation, April 25, 2011

On May 18, 1974 India conducted its first 'peaceful' nuclear test explosion, dubbing the operation 'Smiling Buddha.' But Buddha himself would at best have smiled sardonically at seeing his name tied to such an experiment.

After the test, India vowed never to weaponise its nuclear assets, a pledge that seems to have gone unheeded. A decade later, the country again set out to test its nuclear capabilities in the Operation Shakti tests - five nuclear tests conducted over three days. Pakistan soon followed suit. It has long been clear that India intended to go back on its non-nuclear weapon pledge. Indeed, an early indication was the commencement of the construction of a nuclear submarine after the 1974 nuclear test. Nuclear drills, meanwhile, were reportedly being taught to every Indian naval officer as early as the 1950s by officials from the Bharat Atomic Energy Centre (BARC) in Mumbai, where India converts fissile material into nuclear weapon cores.

In 1976, Dr Homi Nusserwanji Sethna, the chairman of the Indian Atomic Energy Commission at the time, created the Diesel Propulsion Research Team (DPRT), an apparent subterfuge for designing a nuclear propulsion plant for India's first nuclear submarine. A team of four naval officers led by Indian Navy Capt. PN Agarwala and Capt. Bharat Bhusan were inducted into the DPRT.

Many Indian Naval officers at the time were also trained in nuclear engineering at the Bhabha Atomic Research Centre (BARC) and subsequently transferred to the Defence Research and Development Organisation's classified nuclear submarine project, which was called the Advance Technology Vehicle (ATV).

More recently, during a nuclear discussion session at the India International Centre New Delhi, former Indian Prime Minister Inder Kumar Gujral shared an anecdote with the audience highlighting the Indian Navy's desire to induct nuclear submarines with a long-range nuclear missile launch capability. This was the same Gujral who, while ambassador in Moscow in 1979 – and on the instructions of Indian Defence Minister C Subramaniam, Indian Defence Secretary K Subrahmanyam and BARC Director Raja Ramanna – reportedly met Adm Sergei Gorshkov and sought assistance with India's quest for nuclear submarines and long-range, submarine-launched nuclear missiles.

U.S. And French Submarine Commanders Discuss Cooperation

By Mass Communication Specialist 1st Class Gary Keen, Commander, U.S. Naval Forces Europe-Commander, U.S. Naval Forces Africa/ Commander, U.S. 6th Fleet Public Affairs, April 21, 2011

NAPLES, Italy (NNS) — Commander Submarines, Allied Naval Forces South, met with the commander of the French navy's submarine forces April 21, on board Naval Support Activity, Naples.

The meeting between Rear Adm. James G. Foggo III and French navy Vice Adm. Georges-Henri Mouton was part of a two-day visit to strengthen the military ties between the two navies. The two discussed their respective submarine forces and operations in Europe.

"I came to Naples to meet with Rear. Adm. Foggo and discuss the relationship our navies have in regards to our submarine forces, especially our [fast attack submarines]," said Mouton. "I wanted to discuss ideas on how we can work together better and talk about the future."

Even though this was the first time Mouton and Foggo had met in person, they have been working together for a while and were able to speak openly about many issues facing submarine operations in Europe.

"It is important to build strong relationships so you are able to sit down and discuss issues frankly and determine a way ahead," said Foggo. "That is what we did, determined a way ahead and improved on what is already an extremely fruitful and productive relationship between our submarine forces." Foggo continued, speaking about recent cooperation between the two nations' navies with regards to the situation in Libya.

"Our navies operated together during Odyssey Dawn and now during Unified Protector and we can't thank the French navy enough for everything they do," said Foggo.

For more news from Commander, U.S. Naval Forces Europe and Africa/U.S. 6th Fleet, visit www.navy.mil/local/naveur/.

How Spain Lured Nuclear Submarines From The Rock To Rota

By David Eade, Panorama, April 20, 2011

Don't go rushing down to the naval dockyard to see but HMS Tireless has just sailed back in to the bay. I have no idea where the nuclear submarine is in the world, it certainly isn't Gibraltar, but the luckless vessel has been used by Spain as a reason why US nuclear subs should go to Rota and not to Gibraltar.

Last week I reported on the remarks of Senator José Carracao to a committee on foreign affairs where he stated his personal view that US nuclear vessels engaged in operations off Libya should be refuelled and take on supplies in Rota and not the Rock.

When I questioned him on this view he stated that it was logical as Rota was a joint US – Spanish base and he argued that the Cádiz port had adequate security systems for handling a nuclear vessel which he alleged Gibraltar did not.

His second point took me by surprise because if there was a legitimate argument for a nuclear vessel to go to Rota instead of Gibraltar surely it was because it would not have to navigate the crowded waters of the bay or be docked in a populated area but he didn't mention that.

Pressed on the security issue the Ministry of Defence told PANORAMA: "The MOD can reassure your readers that the security of our, and visiting nations', personnel and equipment is of paramount importance to us and we continually keep our security measures under review."

However according to WikiLeaks telegrams published in the Norwegian newspaper Aftenposten the crowded bay is the very argument that Zapatero's government used to its USA counterpart.

After the scandal of HMS Tireless, the nuclear submarine that spent nearly a year in Gibraltar over 2000 – 2001 because of a breakdown to its refrigeration system, there has been widespread disquiet over nuclear vessels docking at the Rock. Madrid argued that to avoid causing concern amongst the residents of the Campo de Gibraltar and protests from environmentalists US nuclear subs should go to Rota instead.

According to leaked cables the Spanish director for European and North American affairs, José Pons, contacted the US Ambassador Eduardo Aguirre in July 2006 when one of that country's nuclear subs was due to arrive in Gibraltar. Pons said for the sake of public sensibilities it would be better if the vessel went to Rota.

It is not that Rota was more acceptable to environmentalists than Gibraltar. Francisco Castejón who is responsible for anti-nuclear campaigns at Ecologistas en Acción stated it was more difficult to detect a submarine in Rota than it was in Gibraltar adding: "The Rock is more accessible and the environmental groups work close to the port. The geography of Rota is more steep, has less visibility and the zone is less populated."

In the event the Ambassador advised the US Armed Forces of Spain's view but stressed that Spain had no authority over questions related to Gibraltar. The US nuclear submarine didn't go to Rota but the Rock and when Pons asked for an explanation he was told preparations for its arrival were already advanced with family members already booked on flights to Gibraltar.

An intriguing series of events then took place. It appears that in January of 2007 the US said it would send more submarines to Rota if Spain lessened the bureaucratic procedures for doing so. This soon was put to the test when the USS Minneapolis – Saint Paul docked to land the bodies of two junior officers who had died after an accident days before off the UK port of Plymouth. The nuclear submarine advised it would stay in Rota whilst an investigation was carried out but the Spanish Government insisted on an exhaustive report to ensure the vessel had not suffered a similar breakdown to Tireless.

It was at this point that WikiLeaks says that Aguirre told Madrid the USA had taken note of its preference for nuclear powered subs to dock in Rota rather than Gibraltar but added that if the Spanish government demanded detailed information then the Rock would return to being the more attractive option.

On July 3 2008 a telegram revealed that 93 per cent of the warships flying US flags docked in Spanish ports and only 7 per cent used Gibraltar. This was despite the fact the British Government was more flexible in issuing licences. Since then under the recent US-Spanish accord over the use of bases in Spain those regulations have been toughened further no doubt making Gibraltar more attractive still. This may explain why two US nuclear submarines, USS Florida and Providence, recently were sent to Gibraltar rather than Rota.

Former Russian Foe Joins Nato Test

UKPA, April 19, 2011

A Russian submarine is to take part in Nato naval exercises for the first time.

It is scheduled to join in next month's undersea rescue exercise off the Spanish coast. The exercise, held every three years, is the largest of its kind in the world and involves multiple subs, warships and search and rescue aircraft.

Nato's and Russia's surface ships co-operate closely as part of the international anti-piracy patrols off the Somali coastline. But no Russian sub has ever taken part in those missions.

During the Cold War, the Soviet Union's massive conventional and nuclear-powered submarine fleets were one of the most dangerous threats faced by Nato.

Military ties between Russia and the alliance have been improving steadily since 2009, despite continuing political disagreements over Georgia and Nato's attacks on Libya.

NATO Prepares Submarine Escape And Rescue Exercise In Spanish Waters

Allied Maritime Command Headquarters Northwood, April 18, 2011

At the end of May this year NATO will carry out a 12 day submarine escape and rescue exercise (SMER). The exercise, which is code-named Exercise Bold Monarch 11, is held every three years and is the world's largest submarine escape and rescue exercise, involving submarines, ships and aircraft from both NATO and non-NATO countries, including Russia. This will be the first time a Russian submarine has participated in any NATO exercise.

Bold Monarch 11 will be conducted off the coast of Spain, near Cartagena, between 30 May - 10 June 2011. Approximately two thousand military and non military personnel will attend from over twenty countries. The exercise is designed to maximise international cooperation in submarine escape and rescue operations – something that has always been very important to NATO and all the submarine-operating nations. Following the tragic loss of the Kursk submarine in 2000 even more international attention has been focused on submarine escape and rescue.

During the exercise submarines from Italy, Portugal, Russia, Spain and Turkey will be 'bottomed' in a sea area just off the coast of Cartagena. Rescue forces equipped with a range of sophisticated debris clearance, diver assisted gear and submarine rescue vehicles from Italy, the USA, Russia and Sweden, together with a jointly owned rescue system from France, Norway and the UK, will engage in a serialized programme to 'rescue' the stricken submariners. Specialist divers and hyperbaric medical teams from France, Greece, Italy, the Netherlands, Spain, Sweden and the UK will work from support ships and be tasked to deal with complex medical problems in what is a very demanding maritime environment. Air units will also deploy from Italy, the UK and US to assist in locating the distressed submariners and to deploy parachutists to provide first reaction assistance.

Exercise Bold Monarch 2011 will culminate with a 48 hour coordinated rescue and evacuation of 150 survivors, including many casualties, from a 'disabled' submarine. Emphasis will be placed on the command and control of such an incident under internationally agreed NATO procedures. The compatibility between the rescue assets, standardization of procedures and coordination and cooperation between ALL national elements, both military and civilian, will be demonstrated in Bold Monarch 2011.

With over 40 nations operating submarines worldwide, interest in this exercise is expected to extend to the entire global submarine community including Australia, Brazil, Chile, China, India, Japan, Pakistan, Peru and S. Korea and many nations are sending representatives to observe what is an extremely realistic exercise.

UK's Nuke Submarine Fleet Secrets Mistakenly Revealed On Website

ANI, April 18, 2011

LONDON: British defence ministry officials are facing an embarrassing situation after secrets related to the country's nuclear-powered submarines was mistakenly published on a website.

The exposed materials include expert opinion about the fleet's ability to withstand a catastrophic accident, and also details measures used by the US Navy to protect its own nuclear submarines, the Daily Mail reports.

The information has also revealed about a fatal flaw in the safety of British nuclear submarines when faced with an onboard accident, besides detailing the way the American nuclear fleet would react in the case of a similar disaster, the Scotsman reports.

The paper quoted Tory MP Patrick Mercer, who served in the Army, as saying that the information would be "hugely interesting" to Britain's enemies and its release "potentially catastrophic".

The documents released on the Parliament website also said that the existing reactors were "potentially vulnerable" to fatal accidents, leading ministers to suggest new versions would be used.

According to reports, anyone browsing the document could read the classified text simply by simply highlighting it and then copying and pasting to another document.

"It's a staggeringly stupid thing to do. Anyone with even an elementary knowledge of computing would know how to read it. I can only assume they gave it to a junior member of staff to deal with. If this document is like this, who knows what else is? It's very sloppy security," Graham Cluley of online security experts Sophos, said.

The concern came at a time when safety on board Britain's nuclear submarines has come under scrutiny after the fatal shooting on board HMS Astute earlier this month.

Papanikolis Submarine Debuts At Salamina Naval Station

By Apostolos Papapostolou, Greek Reporter, April 16, 2011

The wait for its arrival lasted more than four years, while it became a "target" long before its first submersion. The waiting is now over, as the 214-type "Papanikolis" (S120) class submarine, the new acquisition of the Hellenic Navy, arrived four months ago at the Salamina Naval Station near Piraeus.

Another three submarines under the names "Pipinos", "Matrozos" and "Katsonis" will be delivered by next year.

The new Papanikolis-class submarine was built by German's HDW and was commissioned for active duty in the Hellenic Navy during a ceremony held in Kiel, Germany on Oct. 27, 2010.

The "Papanikolis" (S120) is the third submarine in the history of the modern Greek navy named after a legendary WWII submarine. Being the first submarine of its kind that was designed worldwide, it was scheduled to be delivered in 2005. Instead it became part of the Greek naval force with a delay of four-and-a-half years due to high-profile technical problems that were subsequently resolved.

Three submarines of this type already serve in the navy of Korea and one in Portugal, while six have been ordered by the Turkish navy.

Navy Subs To Get Tactical Updates Through Deep Siren

By Henry Kenyon, Defense Systems, April 13, 2011

The Navy has successfully tested an underwater communications system that allows submarines to communicate at speed and depth.

The Deep Siren acoustic communications system permits submarines to relay and share information while under water in a variety of operational environments. This was recently demonstrated during the Navy's ICEX 2011 exercise, which took place north of the Arctic Circle, officials of Raytheon, which developed the system, said April 13.

Deep Siren is intended to fill a gap in the Navy's underwater communications capabilities — the ability to receive tactical information while submerged. The system, which has been in development for some time, operates like a texting service to provide submarines with data in a short message format that is sent and received by software-defined acoustic modems located in disposable buoys launched by the submarine.

Raytheon officials noted that the system is a mature technology that has been successfully tested in a wide variety of oceanographic conditions. Deep Siren is part of a broader Navy effort to provide an underwater network for its submarine fleet.

For ICEX, Deep Siren demonstrated that it can communicate with submarines operating under sea ice. The system was used to help participating submarines meet at a base camp located on the ice sheet 150 nautical miles north of Prudhoe Bay, Alaska. Both submarines were directed to the location via Deep Siren transmissions from the camp.

The system was also used to help evacuate a seaman aboard the submarine USS New Hampshire when he became ill with appendicitis. Deep Siren was used to communicate the emergency and to help report the location of an area of sea ice thin enough to allow the vessel to surface. Deep Siren has been successfully tested by the British Royal Navy in the Mediterranean, and the system is scheduled to undergo sea trials with the German and French navies later this year. The Canadian navy also is planning its own sea tests. Company officials said that another version of Deep Siren designed for use by U.S. Navy special operations forces has already undergone successful initial tests.

What Happened To The Subs?

Peter Veness, The Sydney Morning Herald, April 14, 2011

Two years ago the federal government announced a plan to build 12 new submarines.

Not a word has been said since.

The defence White Paper released in May 2009 committed to spending billions to replace the troubled Collins Class subs.

"The government takes the view that our future strategic circumstances necessitate a substantially expanded submarine fleet of 12 boats in order to sustain a force at sea large enough in a crisis or conflict to be able to defend our approaches," the White Paper said.

Since the paper was released there has been no funding specifically set aside for the initial stages of planning the subs and the Australian Strategic Policy Institute's Andrew Davies and Mark Thomson are wondering just what is going on.

The researchers said in a new ASPI policy analysis it's unfortunate no progress has been made.

"Working through the options early is likely to be crucial," the analysis report said.

The cost of building the subs will likely break the record for the most expensive defence project.

Given the department's history of budget blowouts, ASPI warns the government can't afford to repeat the past.

"The government needs to start thinking hard about the balance of cost, capability and risk it is prepared to pursue," the report said.

Capabilities including the ability to fire missiles to land and pick up special operations soldiers may not be justifiable given their potential cost. "Some preliminary design work and analysis is needed to assess the merit of possible inclusions in the context of the overall design and industry options. If the inclusions came along for little additional cost and technical risk ... they might be worth including," the analysis said. "If they required extensive additions to the hull, such as vertical launch tubes for missiles or purpose-built chambers for special forces, they are likely to be more trouble than they are worth."

Asia To Have More Subs In The Next Decade

By Anuradha Shukla, Asia-Pacific Business and Technology, April 14, 2011

One of the basic characteristics common to most countries in the Asia-Pacific region is that most of these nations are surrounded or are bordered by the sea.

To protect their shores, these nations need to safeguard and keep their maritime lanes open by deploying modern naval systems and capabilities. One of the most effective defense weapons in any navy arsenal is the submarine, which gives even a small naval force a significant advantage against a bigger force without submarine support.

For several years after World War II, the smaller and less economically stable Asian countries aspired to have their own submarine fleets to boost their naval defenses. In the post-Cold War era, submarines remain as the top capital ships for most modern navies, according to the Institute of Peace and Conflict Studies, and Asia-Pacific nations are eager to have these same capabilities as well. However, the extremely high cost of procurement, operation and maintenance of submarine fleets were beyond the economic capabilities of these nations during that time period, and only a few nations were able to incorporate these vessels in their naval fleet.

But the advent of more modern and cost-effective diesel-electric submarines now make it possible for the more economically stable countries in the Asia-Pacific region to add submarines and expand their navies. China and India are at the head of the Asian race to improve undersea capabilities, and have upped the ante by throwing nuclear-powered submarines into the fray. Other countries such as Japan, North and South Korea, Malaysia, Singapore, Pakistan, Thailand, Indonesia, Vietnam and Australia are beefing up their naval arsenal and have made concrete moves to procure more diesel-electric submarines over the course of the next decade.

Existing Naval and Submarine Capabilities

The following describes the current maritime capabilities of major Asian navies and their future plans of procuring additional submarines to their inventories, based on reports from SHP Media.

China

China has the strongest submarine fleet in the region with more than 60 submarines deployed in the People's Liberation Army Navy (PLAN). The Chinese navy has plans of modernizing their existing inventory and will phase out the 30-year old Romeo-class diesel submarines, replacing them with Ming-class, Song-class, or the Russian-built Kilo-class submarines. There are also plans of procuring Russian Akula-class nuclear attack submarines, on top of existing plans to build the new nuclear-powered ballistic-missile Type 094-class submarines.

India

The Indian Navy has four Shisumar-class HDW Type 209/1500 submarines, ten Sindhugosh-class Type 877EM submarines and two 'about-to-be-decommissioned' Foxtrot-class boats. Aside from plans to upgrade these existing inventories, the Indian Navy has ordered six Scorpene submarines and plans to add another six advanced submarines equipped with air independent propulsion systems.

Indonesia

Indonesia is an archipelago with vast maritime coverage but only has two recently overhauled and upgraded Type 209 submarines built in Germany. Indonesia has plans of acquiring at least 12 submarines before the year 2024. These include Type 209/1200 Chang Bogo-class submarines from South Korea as well as Kilo-class and Amur-class submarines from Russia, plus additional Type 214 subs from Germany.

Malaysia

The Royal Malaysian Navy (RMN) has two Scorpene submarines jointly developed and built by DCNA and Navantia. The RMN is planning to acquire more units of the same class and Scorpene design as well as smaller variants called the Andrasta, which is designed to operate in coastal waters off Malaysia's shores.

Singapore

The Republic of Singapore Navy (RSN) has four tropicalized and refurbished Sjoormen-class SSK training submarines that were previously part of the Royal Swedish Navy. The submarines were designed and optimized for shallow waters and are suitable for the surrounding waters around Singapore. Singapore also procured additional A-17 Vastergotland-class subs from Sweden as replacements for their existing Challenger-class submarines.

Thailand

The Royal Thai Navy (RTN) is keen on building their own submarine fleet and has plans of procuring either Russian-built Amur-class submarines or Song-class submarines from China.

Japan

Japan's Maritime Self-Defense Force has existing 18 Harushio-class and Oyashio-class diesel-electric submarines deployed in their naval service, but it has plans of deploying the more advanced Soryu-class subs with advanced air independent propulsion (AIP) systems.

South Korea

The South Korean navy has nine Type-209 Chang Bogo-class and two Type 214 Sohn Wonyil-class submarines deployed. By 2018, South Korea plans to build seven more of the Type 214-class submarines which were developed using German technology.

Taiwan

Due to pressures from the Chinese government, the Republic of China Navy (ROCN) had problems procuring new diesel submarines to add to their old Hai Lung submarines and two Dutch-built Zwaardvis-class submarines. The United States already approved sales of eight additional diesel-powered submarines to Taiwan but does not currently have the manufacturing capabilities to complete the orders.

Pakistan

The Pakistan Navy has deployed three Agosta 90B-class subs, four Daphne-class subs and two Agosta 70 submarines. The Daphne-class subs are to be decommissioned and Pakistan has plans of acquiring three new SSK attack Type-214 submarines.

Australia

The Australian government is also planning to upgrade their naval fleet to the next generation of submarines as replacement for their existing Collins-class submarines, which are forecasted to end their useful service period in 2026. Design work on the new generation of Australian submarines will begin in 2014-2015 and will be their most expensive acquisition for defense inventories, costing \$25 billion and taking up to 17 years to complete. Excluding China, the Asian market is set to spend over US \$50 billion for more than 90 submarines in the coming decade. These procurements will not only focus on conventional diesel-electric submarine technologies but many of these Asian countries are also looking into acquiring nuclear-powered capabilities

as well as next-generation air independent propulsion systems for a stealthier and more enduring underwater defense system.

US: China's 1st Aircraft Carrier Watched By Region

The Associated Press, April 12, 2011

WASHINGTON (AP) — China's first aircraft carrier could begin sea trials as early as this summer and its deployment would significantly change the perception of the balance of power in the region, the chief of U.S. forces in the Pacific said Tuesday.

China bought the vessel from Ukraine more than a decade ago, and it is viewed as emblematic of the communist state's ambition to be a military power that can challenge America's decades-long supremacy in the west Pacific. China's state news agency this month carried photos of the carrier in what it said was the final stages of reconstruction.

"Based on the feedback from our partners and allies in the Pacific, I think the change in perception by the region will be significant," Adm. Robert Willard told the Senate Armed Services Committee. Willard also noted the "remarkable growth" of China's military.

But he viewed that impact as largely symbolic, as there would be a long period of training, development and exercises before the carrier becomes operational.

The U.S. Pacific Command led by Willard has five aircraft carrier strike groups, which it has used to project American power across a region key to global trade. However, China's military build-up, which includes the rapid development of ballistic missiles and cyber warfare capabilities, has spooked its neighbors and could potentially crimp the U.S. forces' freedom to operate.

Willard said that China has increased and improved its fleet of both conventional and nuclear-powered submarines, which had prompted a proliferation of submarines in the Asia-Pacific. He mentioned Malaysia, Vietnam, Indonesia and Australia as countries that have either acquired or signaled their intention to acquire or expand their submarine fleets.

However, Willard said that China's navy has been less aggressive in its operations this year than last. He described that as a "retrenchment" by China following U.S. statements that it has a national interest in the peaceful resolution of territorial disputes in the South China Sea — where China's claims of sovereignty are challenged by several countries in southeast Asia.

"While we continue to experience their shadowing of some of our ships and so forth that are operating in these waters, we have not seen the same level of assertiveness in 2011 that we witnessed in 2010," he said. Willard also attributed this to the U.S. and China resuming military-to-military relations. The ties had been suspended over U.S. arms sales to Taiwan.

Gen. Walter Sharp, commander of U.S. forces in South Korea, said American troops should remain on the volatile Korean peninsula for the "foreseeable future" because of the threat posed by North Korea. He said he did not see North Korean leader Kim Jong Il giving up his nuclear capability as he believes it vital for his regime's survival.

North Korea Builds A Bigger Little Shark

by James Dunnigan, Strategy Page, April 12, 2011

North Korea has apparently been building an improved version of its Song (Shark) class mini-sub. The 250 ton Sang is actually a coastal sub modified for special operations. The original design is a 34 meter (105 feet) long boat with a snorkel and a top submerged speed of 17 kilometers an hour (or 13 kilometers an hour when at periscope depth using the snorkel to run the diesel engines). Top surface speed is 13 kilometers an hour. Max diving depth is 150 meters (465 feet) and the boat is designed to rest on the ocean bottom (useful when trying to avoid enemy search). There is a crew of 15, plus either six scuba swimmer commandos, or a dozen men who can go ashore in an inflatable boat. Some Songs have two or four torpedo tubes. Max endurance is about eight days. The new model is 39 meters (121 feet) long and is believed to have a max submerged speed of 27 kilometers an hour. Over 40 Songs have been built so far, and one was captured by South Korea when it ran aground in 1996. At least half a dozen are of the new model.

North Korea has a fleet of over 80 mini-subs, plus about 24 older Russian type conventional boats (based on late-World War II German designs, as adapted for Russian service as the Whiskey and Romeo class). China helped North Korea set up its own submarine building operation, which included building some of the large Romeo class subs. North Korea got the idea for minisubs from Russia, which has had them for decades. North Korea has developed several mini-sub designs, most of them available to anyone with the cash to pay.

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, and they can be fitted with two torpedoes that are carried externally, but fired from inside the sub.

North Korea is believed to have fitted some of the Songs 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 13 meter (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 3.2 meters (ten feet). Using a snorkel apparatus (a pipe type device to bring in air and expel diesel engine fumes), the boat can move underwater. In 1998, a South Korean destroyer 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.

The use of a North Korea midget sub to sink a South Korean corvette in March, 2010, forced the United States, and South Korea, to seriously confront the problems involved in finding these small subs in coastal waters. This is a difficult task, because the target is small, silent (moving using battery power) and in a complex underwater landscape, that makes sonar less effective.

There are some potential solutions. After the Cold War ended in 1991, the U.S. recognized that these coastal operations would become more common. So, in the 1990s, the U.S. developed the Advanced Deployable System (ADS) for detecting non-nuclear submarines in coastal waters. The ADS is portable, and can quickly be flown to where it is needed. ADS is believed to be in South Korea. ADS basically adapts the popular Cold War SOSUS system (many powerful listening devices surrounding the major oceans, and analyzing the noises to locate submarines) developed by the United States.

ADS consists of battery powered passive (they just listen) sensors that are battery powered and deployed by ship along the sea bottom in coastal waters. A fiber optic cable goes from the sensors (which look like a thick cable) back to shore, where a trailer containing computers and other electronics, and the ADS operators, runs the system. ADS has done well in tests, but it has never faced the North Korean mini-sub.



Sub Vets Precision Drill Team in the Linda Vista Parade

LATE BREAKING NEWS: OSAMA BIN LADEN DEAD

Inside the raid that killed bin Laden

SEALs, working with CIA, stormed fortified compound deep inside Pakistan By Kimberly Dozier and David Espo - The Associated Press Posted: Monday May 2, 2011 22:56:59 EDT,

from Navy times, Monday 2 May 2011

WASHINGTON — Osama bin Laden, the face of global terrorism and architect of the Sept. 11, 2001, attacks, was killed in a firefight with elite American forces Monday, then quickly buried at sea in a stunning finale to a furtive decade on the run.

Long believed to be hiding in caves, bin Laden was tracked down in a costly, custom-built hideout not far from a Pakistani military academy. The stunning news of his death prompted relief and euphoria outside the White House and around the globe, yet also deepening fears of terrorist reprisals against the United States and its allies.

"Justice has been done," President Barack Obama said late Sunday from the White House in an announcement that seemed sure to lift his own political standing.

The military operation took mere minutes, and there were no U.S. casualties.

U.S. Blackhawk helicopters ferried about two dozen troops from Navy SEAL Team Six, a top military counter-terrorism unit, into the compound identified by the CIA as bin Laden's hideout — and back out again in less than 40 minutes. Bin Laden was shot in the head, officials said, after he and his bodyguards resisted the assault.

Three adult males were also killed in the raid, including one of bin Laden's sons, whom officials did not name. One of bin Laden's sons, Hamza, is a senior member of al-Qaida. U.S. officials also said one woman was killed when she was used as a shield by a male combatant, and two other women were injured.

The U.S. official who disclosed the burial at sea said it would have been difficult to find a country willing to accept the remains. Obama said the remains had been handled in accordance with Islamic custom, which requires speedy burial. "I heard a thundering sound, followed by heavy firing. Then firing suddenly stopped. Then more thundering, then a big blast," said Mohammad Haroon Rasheed, a resident of Abbottabad, Pakistan, after the choppers had swooped in and then out again.

Bin Laden's death marks a psychological triumph in a long struggle that began well before the Sept. 11 attacks. Al-Qaida was also blamed for the 1998 bombings of two U.S. embassies in Africa that killed 231 people and the 2000 attack on the USS Cole that killed 17 American sailors in Yemen, as well as countless other plots, some successful and some foiled. "We have rid the world of the most infamous terrorist of our time," CIA director Leon Panetta declared to employees of the agency in a memo Monday morning.

He warned that "terrorists almost certainly will attempt to avenge" the killing of a man deemed uncatchable. "Bin Laden is dead. Al-Qaida is not," Panetta said.

Retaliatory attacks against the U.S. and Western targets could come from members of al-Qaida's core branch in the tribal areas of Pakistan, al-Qaida franchises in other countries, and radicalized individuals in the U.S. with al-Qaida sympathies, according to a Homeland Security Department intelligence alert issued Sunday and obtained by The Associated Press. While the intelligence community does not have insight into current al-Qaida plotting, the department believes symbolic, economic and transportation targets could be at risk, and small arms attacks against other targets can't be ruled out. In all, nearly 3,000 were killed in the Sept. 11 attacks nearly 10 years ago, the worst terror assault on American soil. As news of bin Laden's death spread, hundreds of people cheered and waved American flags at ground zero in New York, the site where al-Qaida hijacked jets toppled the twin towers of the World Trade Center. Thousands celebrated all night outside the White House gates.

As dawn came the crowd had thinned yet some still flowed in to be a part of it. A couple of people posed for photographs in front of the White House while holding up front pages of Monday's newspapers announcing bin Laden's death. "It's a moment people have been waiting for," said Eric Sauter, 22, a University of Delaware student who drove to Washington after seeing TV coverage of the celebrations.

The development seems certain to give Obama a political lift as the nation swelled in pride. Even Republican critics lauded him.

But its ultimate impact on al-Qaida is less clear.

The greatest terrorist threat to the U.S. is now considered to be the al-Qaida franchise in Yemen, far from al-Qaida's core in Pakistan. The Yemen branch almost took down a U.S.-bound airliner on Christmas 2009 and nearly detonated explosives aboard two U.S. cargo planes last fall. Those operations were carried out without any direct involvement from bin Laden.

The few fiery minutes in Abbottabad followed years in which U.S. officials struggled to piece together clues that ultimately led to bin Laden, according to an account provided by senior administration officials who spoke on condition of anonymity because of the sensitivity of the operation.

Based on statements given by U.S. detainees since the 9/11 attacks, they said, intelligence officials have long known that bin Laden trusted one al-Qaida courier in particular, and they believed he might be living with him in hiding.

Four years ago, the United States learned the man's identity, which officials did not disclose, and then about two years later, they identified areas of Pakistan where he operated. Last August, the man's residence was found, officials said. "Intelligence analysis concluded that this compound was custom built in 2005 to hide someone of significance," with walls as high as 18 feet and topped by barbed wire, according to one official. Despite the compound's estimated \$1 million cost and two security gates, it had no phone or Internet running into the house.

By mid-February, intelligence from multiple sources was clear enough that Obama wanted to "pursue an aggressive course of action," a senior administration official said. Over the next two and a half months, the president led five meetings of the National Security Council focused solely on whether bin Laden was in that compound and, if so, how to get him, the official said.

Obama made a decision to launch the operation Friday, shortly before flying to Alabama to inspect tornado damage, and aides set to work on the details.

The president spent part of his Sunday on the golf course, but cut his round short to return to the White House for a meeting where he and top national security aides reviewed final preparations for the raid.

Two hours later, Obama was told that bin Laden had been tentatively identified.

Bin Laden was positively identified through "multiple methods," a senior Pentagon official said Monday, adding that he had personally seen a photo of the corpse. The official, who spoke on condition of anonymity because he was not authorized to speak on the record, declined to say what other methods were used.

The remains were taken to a U.S. warship, but the official declined to say which one or where the ship was.

Panetta was directly in charge of the military team during the operation, according to one official, and when he and his aides received word at agency headquarters that bin Laden had been killed, cheers broke out around the conference room table.

Administration aides said the operation was so secretive that no foreign officials were informed in advance, and only a small circle inside the U.S. government was aware of what was unfolding half a world away.

In his announcement, Obama said he had called Pakistani President Asif Ali Zardari after the raid, and said it was "important to note that our counter-terrorism cooperation with Pakistan helped lead us to bin Laden and the compound where he was hiding."

One senior administration official told reporters, though, "we were very concerned ... that he was inside Pakistan, but this is something we're going to continue to work with the Pakistani government on."

The compound is about a half-mile from a Pakistani military academy, in a city that is home to three army regiments and thousands of military personnel. Abbottabad is surrounded by hills and with mountains in the distance.

Critics have long accused elements of Pakistan's security establishment of protecting bin Laden, though Islamabad has always denied it, and in a statement the foreign ministry said his death showed the country's resolve in the battle against terrorism.

Still, bin Laden's location raised pointed questions of whether Pakistani authorities knew the whereabouts of the world's most wanted man.

Whatever the global repercussions, bin Laden's death marked the end to a manhunt that consumed most of a decade that began in the grim hours after bin Laden's hijackers flew planes into the World Trade Center twin towers in Manhattan and the Pentagon across the Potomac River from Washington. A fourth plane was commandeered by passengers who overcame the hijackers and forced the plane to crash in the Pennsylvania countryside.

Associated Press writers Erica Werner, Ben Feller, Pauline Jelinek and Eileen Sullivan contributed to this story.

Bin Laden buried at sea aboard Carl Vinson

By Andrew Tilghman - Staff writer, Navy Times Posted: Monday May 2, 2011 13:27:09 EDT

While most Americans slept Sunday night, a quiet at-sea burial ceremony took place for Osama bin Laden aboard the Navy carrier Carl Vinson off the coast of Pakistan.

Bin Laden's body was dumped into the water off the northern Arabian Sea after an Islamic ritual that included the ceremonial washing of his body and wrapping him in a white sheet.

His body was placed in a weighted bag, and a U.S. military officer read "prepared religious remarks," which were in turn translated into Arabic by a native speaker, an official said.

"After the words were completed, the body was placed on a prepared flat board, tipped up and the deceased's body was eased into the sea," said a senior intelligence official who spoke on condition of anonymity.

The 50-minute ceremony ended about 2 a.m. Eastern time, which was midday aboard the carrier. Bin Laden was killed hours earlier in a firefight with U.S. forces.

Defense officials said bin Laden was buried at sea because Islamic rites require bodies to be buried within 24 hours of death, and the military did not know of any countries that were willing to accept the body for a land burial.

Experts speculate that U.S. officials feared any land-based burial site would become a gathering point for al-Qaida supporters.

The intelligence official said bin Laden's identity was confirmed in several ways. First, a woman who said she was bin

Laden's wife identified him by name to the troops conducting the raid on the Pakistani compound. Second, CIA specialists compared photos of the dead body to known pictures of bin Laden and were "able to determine to 95 percent certainty that the body was bin Laden," the intelligence official said.

And an initial DNA test of the body showed a "virtual 100 percent match" to known bin Laden family members whose DNA is on file with U.S. intelligence officials.

It is unclear whether further proof of bin Laden's death, such as photographs, will be released, the intelligence official said.

The intelligence official declined to say whether an autopsy was conducted but said bin Laden clearly died in a firefight with U.S. special operations forces.