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San Diego, CA 92120-3404

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The Silent Sentinel

November 2008

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.

U.S. Submarine Veterans
San Diego Base

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The Silent Sentinel via Email

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

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

NAME: _____

ADDRESS: _____

CITY/STATE/ZIP: _____

EMAIL: _____

TELEPHONE: _____

Would like the SILENT SENTINEL emailed: YES_____ NO_____

Robert Bissonnette
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USSVI Base Commander
c/o VFW Post 3787
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*DUE TO LOGISTICS CONSTRAINTS, ALL INPUTS FOR THE SILENT SENTINEL MUST BE IN MY HAND NO LATER THAN **ONE WEEK** AFTER THE MONTHLY MEETING. IF I DO NOT RECEIVE IT BY THIS TIME, THE ITEM WILL NOT GET IN. NO EXCEPTIONS! MIKE*

November Meeting

Our monthly meetings are held on the second Tuesday of the month at VFW Post 3787, 4370 Twain Ave., San Diego. Our November meeting will be on 11 November, 2008. The post is located one half block West of Mission Gorge Road, just north of I-8. The E-Board meets at 6p.m.

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

BINNACLE LIST

Richard Fullen (recuperating in Santee)
Mike Hyman (Crohn's Disease)
C J Glassford (had pacemake put in and recuperating at home)
Larry Freske
Al Strunk (now recuperating at home and doing much better)

Submitted by Mike Hyman

Submarine Losses in October

Submitted by C J Glassford

SEAWOLF (SS 197) - 99 Men on Boar* Including 17 Army Personnel Accidentally Sunk, on 3 October 1944, by US Naval Aircraft from the USS Midway, (CV 63), and USS Rowell, (DE 403), Off Moratai Island : " ALL HANDS LOST "

S – 44 (SS 155) 56 Men on Board: Sunk, on 7 October 1943, by a Japanese Destroyer, Northeast of Araito Island, off Amchitka : " FIFTY FOUR MEN LOST - TWO SURVIVORS "

S – 37 (SS 142) Battery Explosion, on 10 October 1923, In the Harbor of San Pedro, California : " 3 MEN LOST "

WAHOO (SS 238) 80 Men on Board: Sunk, on 11 October 1943, by Japanese Naval Aircraft, Submarine Chasers, and Minesweeper, In La Peruse Strait off Japan : " ALL HANDS LOST "

DORADO (SS 248) 76 Men on Board: Sunk, on 13 October 1943, Cause Unknown, Either Accidentally Bombed and Sunk by Friendly Fire of Guantanamo Based Flying Boat, or Sunk by German Submarine Mine, in the West Indies : " ALL HANDS LOST "

ESCOLAR (SS 294) 82 Men on Board :Possibly Sunk, on 17 October 1944, by a Japanese Mine in the Yellow Sea : " ALL HANDS LOST "

O – 5 (SS 66) Rammed and Sunk, on 20 October 1923, by United Fruit Steamer " Abangarez" in Limon Bay, Canal Zone : " 3 MEN LOST "

SHARK (SS 314) 87 Men on Board: Sunk, on 24 October 1944, by Japanese Depth Charges, in South China Sea, West of Luzon“ ALL HANDS LOST “

DARTER (SS 227) Ran Aground, on 24 October 1944, on Bombay Shoal, in Palawan Passage. Crew Rescued by USS Dace (SS 247), Later Scuttled by USS Nautilus (SS 168), and USS Dace (SS 247) : “ NO LOSS OF LIFE “

TANG (SS 306) 78 Men on Board: Accidentally Sunk, on 24 October 1944, by Circular Run of It’s own Torpedo, in Formosa Strait : “ 9 POW’S, SURVIVED"

Checking Account

Checking Account Balance @ 8/29/2008			$ 2,420.65
INCOME for SEPTEMBER 2008			
		0.00	
40/30/30		0.00	
Subtotal		0.00	
Membership		60.00	
Scholarship Income from 40/30/30		0.00	
Other Scholarship Income		0.00	
Scholarship Income for September		0.00	
Total Income for September (per Bank Stmt)			$ 60.00
EXPENSES for SEPTEMBER 2008			
Silent Sentinel Postage		0.00	
Membership		60.00	
Printer Monthly Maintenance		51.55	
Deluxe Checks - New Checks		86.10	
Deluxe Checks - Plastic Check Holder		12.88	
Total Expenses for September (per Bank Stmt)			$ 210.53
Checking Account Balance @ 09/29/2008			$ 2,270.12
ASSETS			
Base Checking (9/29/08)		$ 2,270.12	
Scholarship Fund Included in Base Checking	273.00		
Base Savings (9/29/08)		9,323.36	
Convention Account (9/30/08)		4,353.61	
TOTAL ASSETS			$ 15,947.09

Commander’s Corner

Sept – Oct 2008

Hello everyone and I hope you all had a good and safe few months. We had a good meeting this month and we bought the USS CATFISH Float off the Scamp Base. It is still located in Fallbrook but if all goes well it will have a new home in San Diego. We were scheduled to have Duncan Hunter Jr. as a guess speaker at the meeting but he had a family emergency and has rescheduled to be our guess speaking for Nov. meeting.

I'm looking forward in having a Christmas party this year and possibly at the VFW on our meeting night. The eboard is looking for any other suggestions for a Christmas party and location. Please email me or any other board member so we can get it roll. Christmas is just around the corner.

As you all know this year's USSVI held the National Convention in Ft. Worth with a good turn out. They would have had a better turn out if it wasn't for mother nature's storms. It was great seeing lots of members from the past years of events and old shipmates I haven't seen for years. Thanks to everyone who manned the booth in Ft. Worth to promote our convention in 2009. And a Special Thanks to Mike & Tracy Hacking for making all the arrangements for the booth and Randy our Convention Coordinator for all the goodies for the booth. And Thanks to Roy and Len from Scamp Base for working on vendor and getting sponsors.

As you all know Pat Householder is our New National Commander. Even if the Charleston votes were counted, Pat would have still won by a large margin. All the By-Law and Constitution Amendments passed except for the Holland Club change. That one was rejected due to a majority of the people voted for both items. It will be rewritten for a better understanding of the amendment. The 2011 National Convention will be held in Springfield Missouri. It sounds like it will be a good time had by all. I'm really excited about our Convention we are hosting and all the Great things we have planned for it. The new Holland Club Chairman is Frank Blister. He took over for Bill Britt after many years of dedicated service as the Holland Club President. Thanks Bill for all your hard work.

As you all know, we have the Veterans Day Parade coming up on 11 Nov down on Harbor Drive. Muster time will be 0900-0930 in the north parking lot of the County Admin. Building. We will have close to 200 active duty personnel from Sub Base, CSS-11, and crew members from the boat. I hope to see you all there, if I'm not in Japan for work. We also have our Sunday Breakfast coming up at the end of Nov. Hope you see you all there to enjoy breakfast or to give a hand in the kitchen. National and base dues are due 31 Dec for 2009. Please get them in early. See Ron Gorance to pay your dues or if you have questions about your dues.

Well, until we meet again, be safe and have fun in Life.

Your Base Commander,
Bob Bissonnette

USS CARBONERO (SS-337) ALERT

This ALERT was passed to me today. Please alert all submariners. Thank you.

Our ASR/ARS Deep Sea Divers Secretary/Treasurer Chuck Micele sent this in his latest newsletter and I thought it might be pertinent to some of you or someone you know.

If you were aboard the USS Carbonero (SS-337) during any of the following dates: May & June 1965 August & September 1966 or April & May 1968, you should contact the nearest VA Medical Center and request an evaluation from their Environmental Agents Group.

This was the boat that was used for the SHAD testing to determine vulnerabilities to chemical and/or biological warfare.

For more information contact Ted McAnly - his email address is thmjmac@netzero.net .

If you have sub buddies out there somewhere, please pass this on to them and ask them to do the same to others they know.

Best regards,

Lin
linmarvil@panhandle.rr.com

USSVI Advisory/Information on Recent National Elections

I was present at all of these meetings during the Ft. Worth convention. All of these itens were discussed in depth. I thought this issue was put to rest then and there. The guy that voted for 40 people on his laptop was running for a Regional Office and therefore placed 40 votes for himself. (The IP of the laptop was able to be traced because Tim VeArd has USSVI using the same computer system the Federal Government, FBI & CIA use). He won the election, was sworn in at the ABM, and was then removed from the Office at the Post ABM Meeting. He was allowed to retain his DC status which includes the Charleston Base because everyone felt that he would be the best person to explain what occurred and what decisions were made to the Charleston Base members.

Unfortunately that has evidently proven not to be true. Please provide maximum distribution to your base members so they will be aware of what really occurred and won't be susceptible to forming an opinion based on all the rumors and inaccurate descriptions

that are floating around. If any one would like to discus this further don't hesitate to have them give me a call.

Take care,
Robert J (Bob) Miller
WRD6 Commander
Silent Service - Pride Runs Deep

- -

From: USSVI NC: Pat Householder [mailto:nc@ussvi.org]
Sent: Monday, October 20, 2008 11:38 AM
To: Robert James Miller
Subject: USSVI OFFICIAL BUSINESS: Flash Traffic - #2008-041
Date: 10/20/2008
To: Distribution List

FLASH-01: A Response to the Charleston Base "Election Protest." Part 1 Submitted by: Pat Householder on 10/18/2008

This message is in response to the "Election Protest" POC Broadcast message sent to many or all Bases by Charleston Base Commander Steve Nelms.

I have delayed several days in this response to allow National Parliamentarian and Atty Ed Yoder to review the allegations and my response. He responded back today by saying "Your response is correct in all respects! I approve of your text and you are OK in sending same to all Bases."

Steve Nelms said that "that you need to hear the complete truth."

Indeed you do.

All members present at the Annual Business meeting heard a full vetting of the election process at that time and there were no disputes made of any of the facts presented.

Contrary to his assertion, the bylaws were not illegally ignored and the election was properly conducted. Their reading of the Bylaws Section 4 is incorrect, as it applies to the process to introduce a matter (resolution) to the Annual Business Meeting.

The report of the Box of Ballots being sent to the election master (a

title) and being rejected forgot to mention that it was liberally salted with proxy votes, which are expressly forbidden in our C&B.

His initial response was to reject all those ballots because it would have been difficult to tell the proxys from the valid ballots. The election master reconsidered and did count the ballots that appeared to be valid, rejecting those written in the same hand, of which there were many.

The Base Commander was encouraged by the Nat'l Commander and by Myself (because he called me) to have those members who had proxy votes submitted to re-vote on their own by paper or online, and he rejected that option, preferring to continue to claim that those proxy votes were valid. Those members were not prevented from voting, in other words, but the submitted proxy votes would not be counted, regardless of his claim. Every Charleston Base member who emailed, called or 'cc' me received the same courtesy reply, letting them know that we wanted to see their vote count, and to please do so either through mail or online voting. Later in the process a number of the affected Charleston Base members did re-vote and their ballots were counted.

As it turned out in the end, whether or not the proxy votes were counted were immaterial to the outcome of the election.

This entire affair was thoroughly discussed at the Annual Business meeting (you can hear it for yourself on the posted videos) and the results of the election were certified at that time.

There will be no re-vote.

I regret to say there were two cases of documented vote fraud reported in this election, and both occurred in Charleston Base. Through electronic means, multiple ballots submitted were traced back to individual computers owned by two members of this base. (you can hear it for yourself on the posted videos)

At the Annual Business Meeting there was a public admission of a Charleston Base member who impersonated over 40 other Charleston Base shipmates to vote online, along with an explanation and an apology to the membership given by that Charleston Base member present, followed by a public apology by the then Eastern Region Director for strongly supporting Charleston Base's position via email without knowing the real facts. This person was dealt with by the Board of Directors in a decisive manner and consistent with fairness and fraternalism. (You can hear it for yourself on the recordings.)

The second person, an officer of Charleston Base, is also accused of impersonating a smaller number of other shipmates to vote online, and I am leaving to the Charleston Base Commander to deal with that situation in whatever fashion he finds proper for his base.

I do not believe this problem extended to the deck-plate members of Charleston Base, who I believe are all honest and honorable shipmates.

Although the problem was framed as an attack on the integrity of the individual members of Charleston Base, the reality was this problem was rooted in some of the attitudes of the leadership of the base instead.

This problem developed out of a mistaken idea that the Base Leadership could conduct national balloting and ignore the voting instructions promulgated by the National Secretary to insure a secret and secure election process.

Whether this decision by the base leadership came out of an ignorance of the election process, a dislike of the serving board members or an arrogant disregard of the established process for other reasons is really immaterial because the result is the same.

All the heartache, accusations and bad feelings could have been avoided if the Charleston Base Leadership had simply followed the voting instruction. Regardless of intent, the result is the same.

http://www.youtube.com/user/SubVetPat

FLASH-02: A Response to the Charleston Base "Election Protest." Part 2 Submitted by: Pat Householder on 10/20/2008

The message I want to drive home is this.

1. It is the policy of this organization and codified in the C&B that the national election is conducted by secret ballot.

2. It is the Nat'l Secretary who manages the Natl Election process subject to the C&B. His instructions should not be ignored by any member, whether base officer or deck-plate member, who wishes his ballot to be counted.

3. All Base Officers are encouraged to turn out the vote, but they are not deputized as a national election official unless done by the National Secretary and they should not handle a completed members vote. Gathering completed paper ballots into a envelope to be sealed and mailed without observing the content is acceptable, and the wise BC will have a witness to that action in case of any challenge.

4. Proxy Voting is NEVER acceptable. Any ballot completed by one person in the name of another person is a proxy vote regardless of motive or intent. Our C&B explicitly forbids it. If there was a question about the meaning of the word "Proxy", the base leadership should have asked the National Secretary or the National Parliamentarian. I believe the Base Officers involved knew the USSVI definition of a proxy vote and decided on their own to disregard it in their attempt to gather in as many votes as possible.

5. A shipmate impersonating another to cast a vote in the name of another shipmate is FRAUD and will NEVER be tolerated, regardless of motivation or grievance. We can build in a lot of safeguard into our voting system, but they mainly keep honest men honest. A crook will always find a way.

All members are encouraged to review the approx fifteen audio/video Ft Worth recordings to see the proceedings posted there. At www.ussvi.org, Click on the VIDEOS button, then USSVI INFO button to view them.

Click on the link below for the videos...

http://www.youtube.com/SubVetPat

Pat

by Daniel T. Rean

The submarine's ability to penetrate a hostile area independently, covertly and for long durations, provided a unique tactical advantage during World War II. Submarines operating undetected near the enemy's coastline

provided a complete picture of the undersea, surface, and near shore military conditions, including enemy force dispositions and preparations. The submarine, with its extremely capable communications ability, operating well inside the enemy's defensive barriers, provided valuable tactical information to assist Army and Marine Corps field commanders in making timely, informed decisions. In that role, submarines paved the way for the effective employment of special covert forces and insulated those same forces from unnecessary risks during the initial phases of guerrilla warfare operations.[1]

Between January 1942 and August 1945, dozens of American submarines participated in special operations ranging from destroying enemy mines to serving as lighthouse beacons to guide Allied ships through uncharted hostile waters. Oftentimes, those special operations were documented by single-line entries in ships' logs, or mentioned in passing in the official reports of the supported units. Those special operations could not have been performed by any other naval assets, military organizations, or land-based forces at the time, yet their documentation is incomplete and relatively unknown outside military fraternities. The historiography of the special operations of World War II submarines is documented in countless publications scattered throughout museums, military archives, and libraries, but no single comprehensive record exists to adequately provide authoritative information on the numerous support missions in which members of America's "Silent Service" participated on a routine basis.

In World War II, the submarine's ability to circumvent traditional defenses was exploited to the fullest to deliver supplies to American-led guerrilla forces, to rescue pilots (both Allied and enemy) who had been shot down over the ocean, to land and extract coast watchers on remote Pacific islands, to evacuate escaped prisoners of war, to lay mines, and to conduct reconnaissance of potential invasion sites for future Allied actions. They were uniquely designed for the role of hunter in hit-and-run attacks in attrition warfare, and were least capable in missions that require prolonged exposure in a sustained defensive posture. The tactics that gave them their greatest fighting potential do not conform to the classical Mahanian[2] naval strategy of defeating the enemy in a battle of annihilation. Although the U.S. Submarine Force made up but two percent of the United States Navy, it accounted for 55 percent of Japanese maritime losses. But, this service paid a high price: out of a total of 16,000 submariners, 375 officers, and 3,131 sailors died at sea, a 22 percent casualty rating, the highest percentage of all U.S. Armed Forces.[3]

The Japanese commander of the carrier task force that wrought so much damage at Pearl Harbor on Dec. 7, 1941, missed a golden opportunity to knock out the U.S. Navy's most effective warships by limiting his target selection to aircraft carriers and battleships... Fortunately for the United States, the Japanese failed to destroy the submarine base in Hawaii... It was the submarine force that carried the load until the great industrial activity of America produced the weapons needed to prosecute the war against the Japanese.

Pacific Theater Commander, U.S. Army Gen. Douglas MacArthur
U.S. Navy photo

The east side of Pearl Harbor with the submarine base at center.
U.S. Navy photo

Modern historians who study the great sea battles of World War II most often focus on the obvious aspects of modern naval warfare by examining the contributions made by aircraft carriers and carrier task forces at battles like Midway, Coral Sea, and the Marianas "Turkey Shoot." To be sure, great sea battles severely crippled the enemy's ability to wage war and provided an incalculable boost to Allied morale. But despite the Mahanian strategic importance of decisive sea battles fought between battleships, heavy cruisers, and their supporting units, the outcomes of these battles had little tactical value to the troops fighting on land. The continued erosion of a nation's ability to support land-based troops through its merchant fleet showed how lethal commerce raiding could be when wedded

Vice Adm. Charles A. Lockwood aboard a U.S. submarine, May 1945. U.S. Navy photo

to submarine technology.[4] The Japanese commander of the carrier task force that wrought so much damage at Pearl Harbor on Dec. 7, 1941, missed a golden opportunity to knock out the U.S. Navy's most effective warships by limiting his target selection to aircraft carriers and battleships. The ships that were sunk or severely damaged in the attack at Pearl Harbor could not have operated effectively in the far western Pacific theater for many months even under the best of circumstances, and their loss to the Navy proved only temporary when they were eventually refloated and repaired. The Japanese Naval High Command knew the strategic importance of devastating the dockyards, the above-ground fuel supplies and the airfields, but they underestimated the value of other ships, which were left untouched in the attack.[5]

Fortunately for the United States, the Japanese failed to destroy the submarine base in Hawaii, preserving the supplies, facilities, and fuel that were needed and leaving it the only service branch capable of bringing the war to the enemy through immediate offensive actions. It was the submarine force that carried the load until the great industrial activity of America produced the weapons needed to prosecute the war against Japan.[6]

The historiography of World War II submarine warfare is treated almost as a separate conflict that pitted the U.S. Submarine Pacific Fleet against the merchant shipping and naval forces of Japan — a sort of war within a war. American submarines in the Pacific, with but limited help of a few British and Dutch boats, played a major role in the defeat of Japan. They decimated that country's merchant fleet, choked off essential supplies and prevented material support for the Japanese war effort. Most historiographies of submarine warfare have focused on the destruction of enemy shipping by describing every aspect in locating, stalking, determining a firing solution, attacking, and sinking a target. There is also an emphasis on trying to recreate the atmosphere that pervaded all submarine combat action – the talking in whispers and movement in stocking feet to reduce unnecessary noise that might be emitted through the hull, and the everyday life in cramped quarters that became even more suffocating when submariners faced the terror and uncertainty of survival while enemy depth charges relentlessly rattled their boat. What is lacking in the history of submarine combat actions during World War II is a summary of all the special operations that were conducted in between the "find 'em, shoot 'em, sink 'em" aspects of submarine warfare. Although the commerce raiding conducted by submarines was their most obvious contribution to the war effort, the secondary role of the submarine as a "shadow warrior" used in covert operations was equally important, and had far greater influences on the peripheral elements of warfare that contributed to the defeat of the Japanese military.

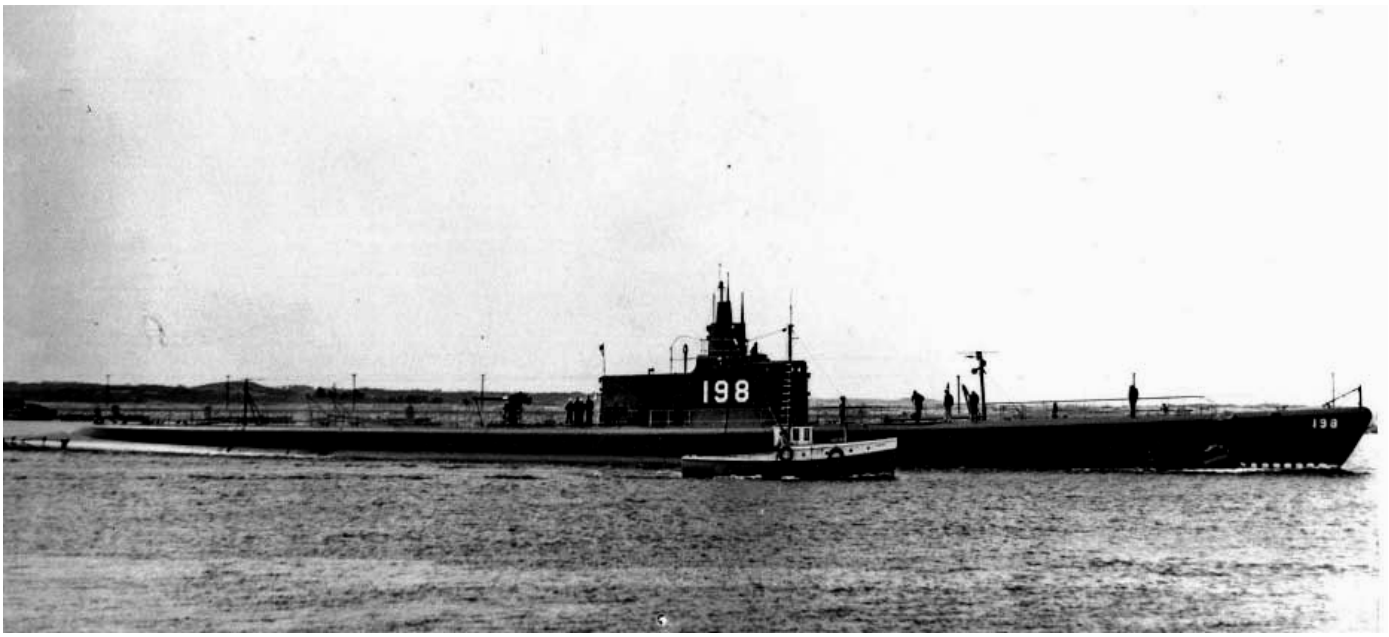
Despite the historical significance and importance of the specialized warfare roles of the submarine forces during World War II, those missions were viewed by the sailors who carried them out as time taken away from their primary function of conducting unrestricted warfare against the enemy. Fleet-type submarines were designed for one mission—to sink ships— and there was little patience for anything else.[7] Doctrine and tactics combined to limit the effectiveness of American submarine attacks in the early days of World War II.

Following the Japanese attack of Pearl Harbor, the Chief of Naval Operations issued the first U.S. fighting directive with the one-line message, "EXECUTE UNRESTRICTED AIR AND SUBMARINE WARFARE AGAINST JAPAN."[8] Neither by training nor by indoctrination was the U.S. Submarine Force ready to carry out the order to fight an unrestricted war against Japan. Submariners were trained to fight a different kind of war – one that stressed action against enemy warships in between routine scouting missions. Submarine commanders were imbued with the idea that they were to observe ethical tactics based on the rules for sea conflict. Those rules were established by international treaty and imposed many legal limitations on submarines. Chief among the restrictions impressed on the memory of every submarine skipper was the provision that any naval vessel found guilty of any violation of the rules in the treaty could be hunted down and captured or sunk as pirates.[9]

Early in the war, submarine organizational and tactical problems were further exacerbated by the fact that all naval operations fell under the authority of the theater commander, Gen. Douglas MacArthur, who believed submarines were best used in support of guerrilla operations as they had proved during their support missions to Corregidor. Since there were only a handful of poorly led and organized guerrilla operations in the Philippines at that time, submarines spent weeks in port waiting for orders from MacArthur rather than operating in enemy waters and destroying Japanese merchant traffic.

In April 1942, Vice Adm. Charles Lockwood was placed in charge of the Asiatic submarine force and immediately began overhauling the command structure. Lockwood reorganized his submarines into squadrons and put them under his direct command. He determined that poor logistical command decisions in combination with submarine commanders who were too cautious and failed to close with the enemy at a range that would increase the chances for a successful sinking were major problems that needed to be overcome. They also displayed little initiative or killer instinct and insisted on the reliance of by-the-book firing solutions, and when they did attack an enemy ship the torpedoes in use at the time ran ten feet below their selected settings and were plagued with faulty magnetic and contact exploders. As a result, one-third of the submarine skippers were relieved of their commands in the first year of the war.[10]

Of all the changes this new admiral made to improve the combat effectiveness of America's submarines, perhaps the most significant change was putting into place a fixed submarine operational schedule with the specific task of supporting special operations.[11] The principles for special operations were simple: A submarine operating in enemy territory could not be seen, but must still accomplish its mission. If a submarine was going to make contact with the enemy, it had to attack on its own favorable terms. And after the attack, the submarine had to disappear, continuing the illusion that an unknown force had engaged the enemy.[12]



USS Tambor (SS-198)
U.S. Navy photo

The first mission executed by Pacific Fleet submarines involved carrying supplies to the defenders of Corregidor. Transportation of intelligence agents to and from enemy-held territory soon followed, but what proved to be the most valuable of those early special operations was the submarine's ability to relay information of enemy ship movements by coast watchers. As part of their everyday duties, and when not under orders to maintain radio silence, submarines reported the weather, tides, available navigation aids, and enemy force structure in their operating area. Special Operations missions were never undertaken without a large degree of risk, but the dangers of those first missions into the unknown were magnified by lack of experience and precedent.

USS Growler (SS-215)
U.S. Navy photo

The special missions were never easy as they usually demanded multiple penetrations of enemy territory — which were far more hazardous than normal war patrols. As the war raged on, submarines were called upon to undertake all kinds of special missions that were divided into several general types: reconnaissance, supply, evacuation or rescue, transportation of coast watchers and intelligence agents, lifeguarding, mining, weather reporting, support of commando raids, and serving as lighthouse beacons for surface ships.[13] Any submarine assigned to special missions might perform more than one of those tasks.

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Following the invasion of Manila, USS Trout (SS-202) transported the entire Philippine treasury (2 tons of gold bars and 18 tons of silver) from Corregidor to Hawaii in order to prevent it from

Special Operations missions were never undertaken without a large degree of risk, but the dangers of those first missions into the unknown were magnified by lack of experience and precedent.[14]

As the American situation on the island of Corregidor began to look hopeless, more and more high-ranking Filipino government officials had to be evacuated. The Japanese knew that the Americans were getting supplies to the island, and increased their own naval presence around the Philippines in an attempt to form a blockade. U.S. submarines were still able to slip through gaps in the Japanese defenses. In February 1942, USS *Swordfish* (SS-193) snuck into a harbor at Corregidor and brought out the president of the Philippine Commonwealth, Manuel Quezon, and several other members of his government. By the end of the month, the American battle for the Philippines and the Dutch battle for Java were virtually over and the Allies had lost.[15] For all practical purposes, the U.S. Submarine Force was the only element of the Asiatic Fleet that remained to fight the Japanese, but the experience the submarine crews learned while performing special missions paid huge dividends in the guerrilla and resistance operations throughout the South Pacific.

In every radio broadcast he made from Australia to the Japanese-occupied Philippines, Gen. MacArthur had famously insisted, "I shall return," a moraleboosting promise heard by many Filipinos on radio equipment brought to the islands on "guerrilla" submarines. When the tide of the war fully turned in favor of the Americans, and MacArthur was finally able to liberate the Philippines from the Japanese, it was the American Submarine Force that played the key role in making MacArthur's promised return a reality.

Shortly after departing the Philippines in early 1942, Gen. MacArthur began looking for a means of harassing the Japanese in preparation for his promised return. Early attempts to contact and organize the bands of guerrillas operating throughout the Philippine Islands were complicated by the fact that the majority of guerrilla forces were little more than roving bandits with no allegiances to any central authority, and whose raids were uncoordinated and accomplished for personal gain. Within a few months of trying to organize the guerrilla effort, it was clear that providing the needed outside support would prove an extremely difficult task, and there was a woeful lack of leadership among the natives despite their apparent loyalties to America.[16]

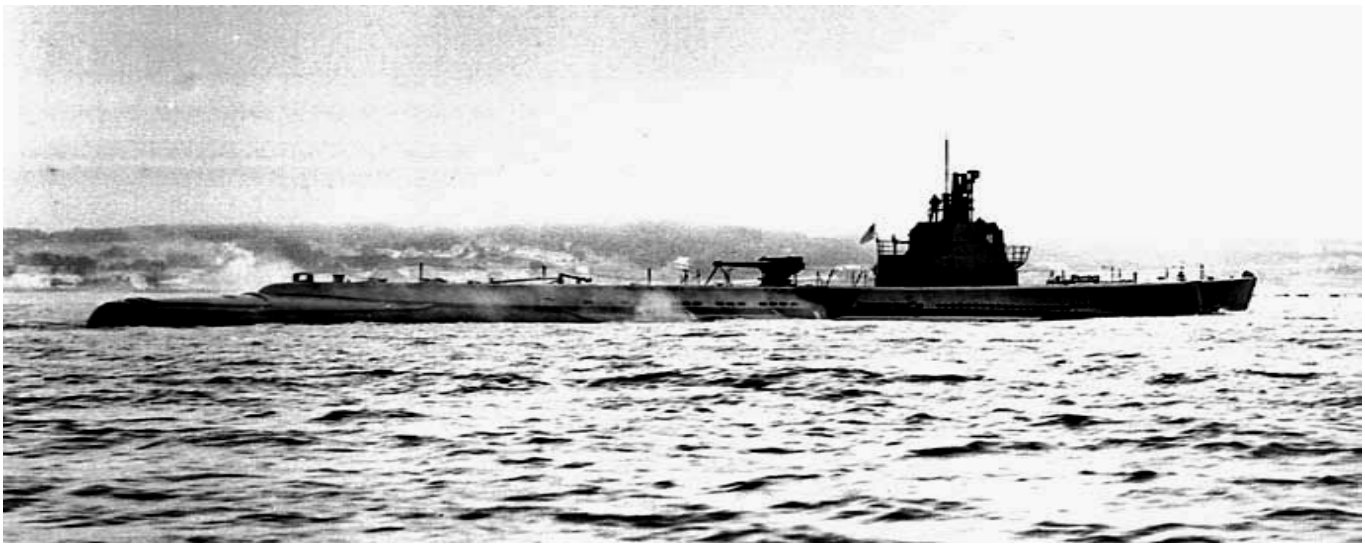
The performance of America's submarine force in providing military aid to the troops on Corregidor convinced MacArthur that those same submarines might be able to provide the supplies and equipment necessary to carry out a sustained guerrilla movement. However, two seemingly insurmountable problems had to be resolved before any covert operation began. Contact had to be made with the guerrillas in the Philippines in order to organize and coordinate their actions and MacArthur needed to find a reliable and well-respected leader who could rendezvous with the guerrilla leaders.

The answer to that problem came in the form of Charles "Chick" Parsons, who had escaped from the Japanese in the Philippines a few months earlier.17 He was also a Lt. Cmdr. in an intelligence unit of the U.S. Naval Reserve who had remained behind in the city to collect intelligence on the Japanese occupiers. Fluent in several of the over 70 native dialects, intimately familiar with the islands, and a good friend of MacArthur from their days together in Manila, Parsons was just the man the general was looking for to act as a liaison with the Filipino guerrillas.

In late February 1943, Parsons was transported to Labangan aboard the submarine USS *Tambor* (SS-198). His first mission was to deliver $10,000 in cash and two tons of ammunition to one of the guerrilla leaders in the region.[18] Parsons also delivered radio equipment for use in setting up his spy network. Weapons, food, clothing, and communications that Parsons delivered on a regular basis were sorely needed by the Filipino guerrillas. This initial clandestine visit to the Philippines lasted until July 1943.

As Allied war planners began to formulate a strategy for the Gilbert Islands campaign, the admiral in charge of air operations contacted Vice Adm. Lockwood and asked him if he could spare any of his submarines to serve lifeguarding duty. Lockwood set up a routine submarine schedule to support the air operations. Submarines were assigned specific stations in the area of air operations and were provided a unique call sign that linked them to that area. Pilots who had to ditch their planes in the ocean were instructed to send an uncoded radio message with the call sign that corresponded to their assigned area. That call sign alerted the submarine in the area that a pilot was in trouble and sent it on its way to make the recovery. In the event that the identification system was ever compromised, to prevent the Japanese from sending false rescue messages the call signs all featured the liberal use of words that started with the letter "L" — such as "Lonesome Luke," "Little Lulu" and "Lollipop" — all linguistic phrases that tongue-tied the Japanese.[19]

The submarine USS *Finback* (SS-230) rescued future U.S. President George H. W. Bush. Lt. Bush was returning from an attack at Chichi Jima when his plane was shot down by Japanese fire over the Bonin Islands. He and his crew waited in a rubber raft for four hours until the submarine surfaced nearby and rescued them. All totaled, 86 American submarines participated in lifeguard missions and rescued 504 Allied airmen.[20] Although it took them away from their primary mission of sinking Japanese ships, lifeguard duty was the one special operation submariners truly enjoyed. It gave them an immediate sense of accomplishment, allowed them plenty of time for routine training and evolutions, and crews were free to pursue any target of opportunity while on station.



USS Gudgeon (SS-211) was a Tambor Class Submarine
U.S. Navy photo

By the summer of 1945, the Submarine Force had run out of targets, and the boats could go almost anywhere they wished to accomplish special missions. In the closing months of the war, submarines equipped with rocket launchers bombarded military and industrial targets in northern Japan.[21] Photographs of enemy positions taken from the periscopes of submarines were unheard of at the start of the war. However, by war's end, that type of information became so valuable that Allied war planners were unwilling to devise definitive operational plans without it.[22] The overall effects of submarine warfare were so obvious that some American planners believed that the economic collapse of Japan made an invasion of the home islands unnecessary.[23]

As the war continued and the submarine's versatility was more widely recognized by all branches of the service, the undersea warriors were called upon to undertake all manner of special missions. The joint operations culminated in a mutual respect between the men in the field and the men on the boats, as well as an increased likelihood of success in every special mission. Because special missions seldom afforded an opportunity to sink enemy shipping, many of those missions were disliked by the men who accomplished them. Although difficult to measure in terms of cold facts or statistical parameters, their value in promoting the ultimate defeat of the enemy was immense.[24]

The 20 submarines that supported the guerrilla operations in the Philippines as part of "MacArthur's Navy," successfully completed 41 missions in which 472 persons were evacuated, 331 persons were delivered, and 1,325 tons of supplies were unloaded.[25] All of the special missions were accomplished in the enemy's backyard at great risk to the safety of the submarine and her crew. Given the strategic circumstances of some of the tasks, the variety of operations that were performed and the hazards involved, it is more appropriate to designate those operations as "extraordinary missions." Most people will never know what the submarine force accomplished in World War II. In the other services, the territory that was captured was represented on maps. No flag was raised over the spot where an enemy ship was sunk indicating the submarine responsible for that sinking.[26] Submarines had to disappear as quickly as they had struck. Stealth and surprise were never more needed than during the accomplishment of special missions. Yet for all of the special missions they accomplished, submarine service in the Pacific was a highly personal experience marked by combat operations against enemy ships. That action was filled with memories of the smells of sweat and oil, the bone-shattering concussion of exploding depth charges, the controlled chaos of an emergency dive, the tension of a submerged attack and the quick peek through the periscope at a flaming tanker, but most of all, there was a deep sense of accomplishment.[27]

The pre-war strategists who saw submarines as secondary naval units limited to torpedo attacks were surprised by what the boats left untouched in the attack on Pearl Harbor were able to accomplish with only four years of combat experience. The employment of submarines in extraordinary special missions, combined with the ingenuity of submarine commanders and their crews, made impossible tasks realities, and proved that through initiative, teamwork, leadership, and ingenuity, America's submarines were the most valuable assets of World War II.

Endnotes and bibliography for this article are available in the online version, available at **http://www.navy.mil/navydata/cno/n87/usw/issue_37/index.html**

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Military Housing Offers Advantages

By:MC2(AW) Peter D. Blair, The Dolphin, October 23, 2008

GROTON, Conn. - As the cold temperatures of another New England winter approach, and the uncertain economy heralds in uncertain electricity, gas, and oil prices, living in military housing can make sense and "cents."

"Military housing not only offers service members a home in a community of military neighbors and friends, but also a residence where the fears of utility costs are nonexistent," said Donna Wilson, Navy Family Housing Director for Naval Submarine Base New London.

Military housing for SUBASE service members and families is Public Private Venture (PPV) housing managed and operated by Balfour Beatty. Basic utilities (water, power, and heat) and rent form a housing cost that is equal to the service member's Basic Allotment for Housing (BAH). The service member's few housing costs subject to the fluctuations of the economy are those luxury services like, telephone, Internet, cable, or satellite.

Additionally, SUBASE's military housing is located very close to the base, providing shorter commutes to base facilities and savings in gas and transportation costs.

"Another tangible benefit of military housing is maintenance peace of mind," added Wilson.

At SUBASE's military housing, when there are problems that need to be fixed, Balfour Beatty sends out professionals to fix them at no cost to service member occupants.

"Seeking that fix-it assistance is easy too," noted Wilson. "There are two avenues you can pursue to report a problem in your home: telephone and e-mail. And, telephone is monitored 24 hours a day."

Of course, other benefits of military housing may be more indirect, Wilson pointed out, like that sense of family and community.

"For some military spouses and families, military housing can serve as a community support center," said Wilson. "When a service member is deployed, neighboring families tend to help that service member's family out."

The military housing community offers many options and joining is trouble-free Balfour Beatty leases ranch, townhome, and single family style homes ranging from 2-4 bedrooms depending on the size of the family and the service member's rank.

Service members just need to visit the SUBASE Housing Office for a referral to military housing; Balfour Beatty then stewards them through the completion of the placement process.

"First priority goes to active duty personnel," said Wilson. "After 30 days, if a home is not occupied, then the Preferred Referral List (PRL) is used to place someone in that home."

The PRL allows active duty Guard or Reserve personnel, as well as active duty bachelors, unaccompanied families, DOD employees, Reserve bachelors, military retirees and even civilians to occupy military housing.

"Active duty with families, active duty without ISSA, and active duty Guard are charged a housing cost equal to their BAH. Other qualified tenants must pay the Fair Market value," said Wilson.

All personnel not on active duty must undergo background checks to ensure they are qualified to live in housing and to safeguard the community.

Once accepted to live in military housing, service members must sign a lease and then decide which of two methods they would like to use to pay their monthly rent. In electing payment through direct deposit instead of a monthly check or money order, the service member eliminates the requirement to provide a security deposit upon signing the lease.

There are no application fees, credit check fees, or pet fees for active duty personnel.

For more information on Navy Family Housing and military housing visit the SUBASE Housing Welcome Center located in Dealey Center, Building 164; e-mail new_london@housing.navy.mil; or phone (860) 694-3851.

Multipurpose Sub For Scrapping

Barents Observer, October 21, 2008

The Zvezdochka shipyard and mechanical plant in Severodvinsk, Arkhangelsk Oblast, has started the decommissioning of the multipurpose nuclear submarine K-480 "Bars".

The retired vessel was built in the neighboring shipyard of Sevmash in 1978 and then taken out of service in 1988, Rosbaltnord.ru reports with reference to Itar-Tass.

The sub belongs to the Akula-class vessels, which is considered the most modern and silent-going of Russia's multipurpose submarines. A total of 17 of the vessels were constructed in the Soviet Union.

The Project 971 vessels are up to 110 meter longs and have a crew of 73.

U.S. Navy Launches Raytheon Tomahawk Block IV From Virginia Class Submarine

Your Industry News, October 21, 2008

A U.S. Navy Virginia class submarine fired a Raytheon Company (NYSE: RTN) Tomahawk Block IV missile from the Gulf of Mexico to engage a simulated target.

The flight completes the integration of the Tomahawk cruise missile onto the Navy's newest fast-attack submarine, adding another platform to the list of combatant vessels that can carry the combat-proven weapon.

"Integration of the Tomahawk Block IV on the Virginia class submarine provides the fleet with a powerful combination of delivering Special Operations Forces and supporting them with the power and precision of the Tomahawk missile," said Capt. Rick McQueen, the U.S. Navy's program manager for the Tomahawk weapon system. "The Tomahawk currently is used very effectively in the global war on terror. The fleet now has the ability to expand the prosecution of this mission with increased stealth, flexibility and precision firepower."

Tomahawk Block IV is a surface- and submarine-launched precision strike stand-off weapon. It is designed for long-range precision strike missions against high-value and heavily defended targets.

"This test highlights a successful integration effort that provides all the capabilities of the Tomahawk missile on Navy platforms that include destroyers, cruisers, fast-attack and guided-missile boats," said Gary Hagedon, Raytheon's Tomahawk program director.

Raytheon Company, with 2007 sales of $21.3 billion, is a technology leader specializing in defense, homeland security and other government markets throughout the world. With a history of innovation spanning 86 years, Raytheon provides state-of-the-art electronics, mission systems integration and other capabilities in the areas of sensing; effects; and command, control, communications and intelligence systems, as well as a broad range of mission support services. With headquarters in Waltham, Mass., Raytheon employs 72,000 people worldwide.

Transplant Complete, Attack Sub Floats Again

By Philip Ewing, Navy Times, October 21, 2008

More than three years after a devastating underwater crash killed one sailor, injured 100 more and crushed the bow of the fast-attack submarine San Francisco, the ship has returned to the water after a first-of-its kind overhaul.

In the maritime equivalent of a major organ transplant, workers at Puget Sound Naval Shipyard, Wash., amputated more than 1 million pounds' worth of the bow section of the decommissioned attack sub Honolulu and grafted it onto the ailing San Francisco.

"The engineering and production teams proceeded to manipulate the mammoth structure with orchestrated precision," according to an announcement from Naval Sea Systems Command. "In some areas, the bow of this massive structure was moved to within 1/16 of an inch of the original structure."

With the surgery complete, the San Francisco floated off its dry dock for the first time Oct. 10. The ship has been in the yard since December 2006.

The systems transferred from the Honolulu — a newer Los Angeles-class sibling commissioned in 1985, four years after the San Francisco — included its active sonar sphere and its forward ballast tanks.

Although the Honolulu is four years younger than the San Francisco, the older sub's nuclear reactor had been refueled three years before the accident at a cost of roughly $170 million.

The Honolulu was scheduled to be decommissioned in 2006 even before Navy planners decided to use its bow section on the older sub.

Navy engineers determined it would be cheaper to transplant the Honolulu's forward equipment to the San Francisco, for an estimated $79 million, than it would have been to refuel the Honolulu, for another estimated $170 million, if it were kept in commission.

The San Francisco crashed into an undersea mountain Jan. 8, 2005, suffering damage so severe that the warship almost sunk. The ship struggled to Guam, and after temporary repairs, the ship sailed 5,600 nautical miles to Puget Sound on the surface, the longest trip a U.S. submarine has made without submerging. Although the San Francisco is the first submarine to get another submarine's bow, the procedure is common with surface ships. In 1956, for example, the battleship Wisconsin collided with a destroyer in heavy weather off Norfolk. To repair it, Navy engineers sliced the bow off one of the two unfinished Iowa-class battleships, the Kentucky, and replaced the Wisconsin's original bow.

Chinese Boats Stalk George Washington

Strategy Page, October 21, 2008

Japan has increased anti-submarine patrols in international waters, just outside Japanese territorial waters. Chinese submarines are apparently exercising there more frequently, looking for Japanese, South Korean and American warships to play tag with. The U.S. has also redirected more of its space based naval search capabilities to assist the Japanese.

Chinese Song class diesel electric and Han class nuclear powered boats were detected and tracked recently. One of each of these was spotted stalking the American carrier USS George Washington, as it headed to South Korea for a visit.

China is rapidly acquiring advanced submarine building capabilities, and providing money (for fuel and spare parts) to send its subs to sea more often. Moreover, new classes of boats are constantly appearing. The new Type 39A, or Yuan class, looks just like the Russian Kilo class. In the late 1990s, the Chinese began ordering Russian Kilo class subs, then one of the latest diesel-electric design available. Russia was selling new Kilos for about $200 million each, which is about half the price other Western nations sell similar boats for. The Kilos weigh 2,300 tons (surface displacement), have six torpedo tubes and a crew of 57. They are quiet, and can travel about 700 kilometers under water at a quiet speed of about five kilometers an hour. Kilos carry 18 torpedoes or SS-N-27 anti-ship missiles (with a range of 300 kilometers and launched underwater from the torpedo tubes.) The combination of quietness and cruise missiles makes Kilo very dangerous to American carriers. North Korea and Iran have also bought Kilos.

The Chinese have already built two Yuans, the second one an improvement on the first. These two boats have been at sea to try out the technology that was pilfered from the Russians. A third Yuan is under construction, and it also appears to be a bit different from the first two. The first Yuan appeared to be a copy of the early model Kilo (the model 877), while the second Yuan (referred to as a Type 39B) appeared to copy the late Kilos (model 636). The third Yuan may end up being a further evolution, or Type 39C.

Preceding the Yuans was the the Type 39, or Song class. This was the first Chinese sub to have the teardrop shaped hull, and was based on the predecessor of the Kilo, the Romeo class. The Type 39A was thought to be just an improved Song, but on closer examination, especially by the Russians, it looked like a clone of the Kilos. The Yaun class also have AIP (Air Independent Propulsion), which allows non-nuclear boats to stay underwater for days at a time. China currently has 13 Song class, 12 Kilo class, one Yuan class and 32 Romeo class boats. There are only two Han class SSNs, as the Chinese are still having a lot of problems with nuclear power in subs. Despite that, the Hans are going to sea, even though they are noisy and easily detected by Western sensors.

Submariner Shares Memories Of Pacific War

By Al Everson, DeLand-Detona Beacon News, October 21, 2008

As he looks back over more than six decades, DeLand's Bob Bruderly recalls his service aboard the USS Bowfin with fondness and pride.

"I helped put her in mothballs at New London, Conn., in 1946," Bruderly said.

He had spent three years on the submarine and had risen to petty officer first class.

"It might have been dangerous, but it was all very interesting," he said. "It was fun to do your job and do it well."

The Bowfin is now docked at Pearl Harbor. Bruderly said he has visited the ship — now a tourist attraction — several times in recent years.

"They're beautiful ships. Well-built," he added.

Like most Americans of Bruderly's generation, World War II was an inconvenient interruption of civilian life in a nation emerging from the Great Depression and promising the good life to anyone willing to work hard and study for self-improvement.

The Salem, Ohio, native was a student at Youngstown State University when the U.S. entered the war in 1941.

"I went into the Navy in '42," he said.

There was little choice for young American men eligible for military service.

"It was either that or get drafted," Bruderly said. "I really did not anticipate getting into submarines, but after I got in, I figured, 'What the heck?'"

Because of its extra dangers and challenges, submarine duty was for volunteers only.

"It carried $50 higher pay. There was that incentive," Bruderly said.

Sailors also received higher pay for duty at sea.

Bruderly remembers joining the Bowfin's crew in 1943. He stayed with the vessel through the end of the war. The submarine was based in Fremantle, near Perth on the west coast of Australia, at that time.

"It took 30 or 35 days to get there," he said, referring to the trans-Pacific voyage from the U.S.

During his tour aboard the Bowfin, it made seven war patrols,

"A patrol would last anywhere from two weeks to 30 or 40 days," Bruderly said.

His sub sought out Japanese ships, and the crew was especially on the lookout for cargo vessels. The Bowfin did not shy away from Japanese warships, even sinking at least two destroyers.

"Whatever came along, we would take a shot at it," he remembered.

The Bowfin could carry as many as 20 torpedoes when fully loaded for a war patrol.

"Some of them were very short. You would go above Fremantle, and once you find some targets, it doesn't take long to fire that many," he said.

Most of the Bowfin's missions were in the Pacific Ocean's tropical zones, but toward the end of the war, the sub went into the Sea of Japan to attack one of the enemy's lifelines.

"We went through minefields. We were in a wolf pack. There were eight boats. Seven came out. The Billfish is still there," Bruderly said. "No survivors."

The Bowfin and its companions struck convoys of ships carrying raw materials and fuel from China to the Japanese home islands.

Even at the height of the war in the Pacific, the U.S. Navy was still experiencing problems with its torpedoes. The Mark XIV torpedo often veered from its intended path, and it sometimes failed to detonate upon contact with an enemy ship.

"The exploder mechanism was not very good," Bruderly said.

The Mark XIV was a "steam torpedo," powered by alcohol that burned and left a trail of steam the enemy could sometimes spot as the weapon sped beneath the surface to a target. The Mark XIV was later replaced by the Mark XVIII, an electric torpedo that, though it traveled more slowly, left no trail and had a more reliable detonator.

As for the legends of "torpedo juice" as a beverage for thirsty sailors, Bruderly confirmed such war stories are true.

"It was about 200 proof. You really had to cut it tremendously to make it drinkable," he said.

The crew sometimes used orange or grapefruit juice as a blender.

Because of his knowledge of electricity, Bruderly was assigned to work with the submarine's batteries. The batteries, which were charged by diesel engines used while running on the surface of the sea, powered the sub whenever it had to run underwater.

"We had 126 cells. They provided us with 250 or 260 volts of power," Bruderly said.

The Bowfin was, in effect, a hybrid vehicle, long before the dual-power systems were installed in cars.

When its batteries were fully charged, the Bowfin could remain submerged for "40 to 50 hours maximum," according to Bruderly.

"You only stayed down as long as you had to," he said. "Our top speed submerged was 4 or 5 knots. We would do about 18 to 20 knots on the surface."

Those "had to" times included during attacks by Japanese destroyers dropping depth charges.

"They could keep you down for many hours, if they didn't run out of depth charges, of course," Bruderly said.

Depth-charge explosions close enough to a submarine could crush or severely damage the hull, likely dooming the crew. The Bowfin and its sister subs had to take evasive action.

"We would rig for silent running. We would shut down the air conditioning," Bruderly said.

The Bowfin was preparing for yet another mission in August 1945, when word came of the dropping of two atomic bombs on Japan and the subsequent surrender.

"We were out at Pearl [Harbor] getting ready to go on another patrol," Bruderly said.

The mission was canceled, and the Bowfin was ordered back to the U.S. via the Panama Canal.

"We got orders. We came back to New York City. It was a happy occasion."

Bruderly, who had married in California during the war, left the Navy in 1948. He later returned to Ohio and earned a degree in electrical engineering from Youngstown State University in 1954. He then went to work for Westinghouse Electric.

Russia Has Over $5 Bln In Foreign Naval Orders

RIA Novosti, October 21, 2008

Foreign orders for Russian naval hardware for the next three years exceed $5 billion, a state arms export monopoly senior official said on Tuesday.

"The portfolio of orders, namely contracts signed and in force, is estimated at over $5 billion, with different deadlines up to 2011," said Ivan Goncharenko, first deputy general director of Rosoboronexport.

In 2007 the share of naval equipment in Rosoboronexport's portfolio of export orders was 9% or $600 million, the official said, adding that India, China, Algeria, Vietnam and Indonesia remained key buyers of Russia's naval armaments.

India and China have purchased submarines, frigates and destroyers. Vietnam has ordered Svetlyak-class fast attack boats and frigates, while Indonesia will receive corvettes built in Russia in cooperation with Spanish firms.

Speaking about the naval orders from Venezuela, Goncharenko said Russia had not signed any contracts with Caracas to supply submarines, as some media sources had speculated.

"We discuss arms deals with many countries, but as of today Rosoboronexport has no submarine contracts signed with that country," he said.

Venezuela's vice president, Ramon Carrizales was earlier quoted as saying that the Latin American state planned to buy Amur-class diesel submarines from Russia.

Todaro Pulls Into Submarine Base New London

By John Narewski, October 15, 2008

Crewmen aboard the Italian submarine ITS Salvatore Todaro (S 526) fire a shot line toward the pier as they pull in to Submarine Base New London for a port visit. Todaro is returning from New York where crewmembers participated in events honoring Italian explorer Christopher Columbus during the Columbus Day weekend. Todaro is the first Italian submarine since World War II to cross the Atlantic

US Naval Chief Says Subs Can Curb China

Brendan Nicholson, Canberra, The Age, November 7, 2008

THE commander of the US nuclear submarine fleet said he believes China's navy is a growing threat and it is vital that American and Australian submarines continue to operate together as "the deadliest force in the world".

Vice-Admiral Jay Donnelly said in Canberra that the biggest security concern in the region was China's increased military spending and arms build-up.

Vice-Admiral Donnelly told a conference of the Submarine Institute of Australia that China was building up to prevent any third party intervening in a conflict with Taiwan.

He said the US was moving 60% of its submarine fleet to the Pacific to respond.

Several weeks ago Prime Minister Kevin Rudd said Australia must develop its armed forces to counter a regional arms build-up — although he did not name China as a threat.

Vice-Admiral Donnelly said Australia's Collins Class submarines could play a crucial role in any future conflict because they were able to operate at very long range without air support in dangerous areas.

He said Chinese defence spending rose by 19% in 2007 and that trend was continuing.

"While the large number of ships being constructed by the Chinese is cause for concern, more important is that we simply don't understand the rationale for many of their activities."

China was developing the ability to disrupt US military satellites and to destroy surface ships far from its shores, he said.

Navy, Raytheon Effort Deploys Sub Launched UAV Out With The Trash

By Geoff Fein, Defense Daily, November 6, 2008

The Navy and Raytheon [RTN] last month simulated a submarine launch of an unmanned aerial vehicle (UAV), not from a torpedo or vertical launch tube, but from the boat's trash disposal system, a company official said.

The program, Submarine Over the Horizon Organic Capabilities (SOTHOC), is a method of taking an unmanned aerial system (UAS) that's required to be maintained dry, and transitioning from the water environment to the air, Jeffrey Zerbe, SOTHOC program director, told Defense Daily earlier this week.

Currently, Raytheon and the Navy are using what Zerbe called a "mass model representative" of a UAV for testing. The launcher was developed by Ultra Electronics Maritime Systems.

"They worked on some communications at speed and depth. That was the precursor to this effort," he said. "We use some of that technology to develop this launch mechanism for the aircraft."

The launcher was designed within the dimensional flexibility of the trash disposal unit to be as large as possible, Zerbe added.

"[The trash disposal unit has a] relatively large diameter orifice that can not only be used for shooting trash but other things can be placed in it, and through the ball valve, released into the ocean," he explained. "That was an existing method to get something out."

The challenge became once the launcher holding the UAV is outside the submarine how does it get safely clear of the boat and then back to the surface in such a manner that it would be ale to launch an aircraft given the right parameters, Zerbe said.

"It's initially negatively buoyant. We put some weights on it.

Once it leaves the submarine's trash disposal unit and gets into the flow stream, and based on its center buoyancy and gravity it rights itself at a preset depth," he said. "At a preset depth, we start pulsing the inflation collar, and it starts going up."

Once on the surface...it has an inertial measurement unit (IMU) onboard and some electronics that sense it is in the right place in respect to the wind and angle for launch, Zerbe said. "Then it goes ahead and cocks the launch position, opening the pressure vessel and the aircraft flies away."

The UAV is preloaded with the mission profile, and for the most part it is an autonomously controlled vehicle, he said. The submarine, which will be at periscope depth, can transmit updates to that mission profile, Zerbe added.

Raytheon has some growth opportunities in regards to the vehicle it is using, and the system is adaptable to different vehicles, within reason, Zerbe noted.

"In the realm of the smaller [UAVs] there are even a few that would withstand this scenario, and have the robustness in a maritime environment to deal with the winds and all that go with that," he said.

"So there is probably a short list of vehicles and manufacturers that would fit the bill here.

"But another important point to make here, this launcher concept is scalable. So even though we might be launching a smaller tiered-type vehicle now, if it is desired at some point to expand the capability— longer endurance, greater payload, we can essentially scale up this submarine launch vehicle to house larger vehicles," Zerbe said.

But the size of the launcher does limit the size of the vehicle, he noted.

Within the launcher there is a pressure vessel that houses the aircraft, Zerbe said. That is going to impact the size of the vehicle to be carried by the launcher.

"We designed it, both from a cost perspective and capability perspective, to be a one-way," Zerbe said. "Part of the system architecture here allows you, in different scenarios depending on where it's launched from, to fly it into the beach and have it recovered on land and potentially returned to service. That's within the CONOPS (concept of operations) of this capability."

And the launcher itself is not limited to transporting a UAV to the surface, Zerbe said.

"Many concepts are coming out...you've got a dry interface, you can house something, you can store something, potentially for a lengthy period of time and then activate it to launch whether it be submerged or on the surface," he said. "Obviously, there are other applications, both military and civilian, that would apply here, especially as you start talking about the scalability of it."

Demonstrating the capability of releasing the launcher and getting it to the surface, was the culmination of Phase I of the program, Zerbe said "Phase II is where we then take the developed launcher, the highest risk portion of the project, and fully integrate a proven vehicle into it," he said.

Early next year, after successful completion of testing at Naval Air Station Pt. Mugu, Calif., Raytheon will go onboard a submarine and do exactly the same test only this time, instead of dropping the launcher over the side of a submarine, it will be deployed out of the trash disposal unit, Zerbe said.

"We anticipate getting out to Pt. Mugu this year, and then out to PMRF (the Pacific Missile Range Facility) and complete submarine testing early next year," he said. "Upon successful completion of the Pt. Mugu testing, we will identify an aircraft manufacturer.

Buy Or Sell-Defense Contractors Under Obama

Reuters, November 5, 2008

NEW YORK, Nov 5 (Reuters) - Is it a good time to buy defense stocks, which generally fare better than others in a recession?

Or is it already too late to profit from the consensus view that ascendant Democrats will not slash U.S. defense spending?

The Pentagon's budget is expected to grow more slowly under Barack Obama, after the war-fueled bonanza of the past seven years, but the President-elect has signaled there will be no major program cuts for at least 18 months.

Even if there are cuts, history suggests the sector fares as well, if not better, during Democrat administrations as Republican ones.

BUY ON DIP

"We see significant upside potential for all of the large defense prime stocks," said Douglas Harned, an analyst at Sanford C. Bernstein, even factoring in declining growth in defense spending.

If defense stocks go down in the the run-up to Obama's administration, it would be "a buying opportunity," he added.

The new government may look to cut high-risk or troubled programs, but labor-intensive projects — such as the Joint Strike Fighter — will be well supported by Congress to preserve jobs, in his view.

Harned sees Lockheed Martin Corp (LMT.N) as the top pick among pure-play defense companies, with substantial long-term growth promised by the JSF, the United States' next-generation fighter jet, which eight other countries have committed to buy, making it an unlikely target for cuts. He also rates missile maker Raytheon Co (RTN.N:) as an outperform.

GOOD DEFENSIVE SECTOR

"Obama's victory is probably no worse for the outlook for defense and could even prove to be better than the alternative," said Harry Nourse, an analyst at Bank of America.

"The sector offers a relative haven during recessionary periods, due to the lack of correlation between GDP growth and defense funding," he said.

Nourse's analysis over the past 35 years shows defense stocks tend to slightly outperform other sectors in the month after a Presidential election, regardless of which party wins.

Obama's chief defense advisor, former Navy Secretary Richard Danzig, does not expect defense spending to decline in the first years of his administration, Nourse said, which should provide some comfort for investors.

But the time to profit may have passed.

"The markets will have largely anticipated this development, with an Obama victory having become increasingly likely over the last six weeks," Nourse said.

The Standard & Poor's Aerospace and Defense index has risen 23 percent in the past week since hitting a 4-1/2 year low last Monday. It is still down 37 percent from the all-time high in October 2007.

STAY ON SIDELINES

"The Obama Administration intends to curtail defense spending growth, with an eye for a potential defense budget peak possibly in 2010 or the year after," said analyst Heidi Wood at Morgan Stanley, who suggests staying on the sidelines for now.

Obama has agreed with his defense leaders not to cut the Pentagon's budget within his first 18 months in office, Wood said, but after that will focus on cutting inefficient programs.

"This new team intends fewer new program starts, possibly shorter-lived programs, less over-reaching technology, focus on affordability, cost control and greater interoperability with U.S. allies," according to Wood.

In such an environment, Wood, who describes herself as "long-time bull" on defense, forcasts no special performance from the sector and says she remains on the sidelines.

She rates only two companies overweight: Lockheed Martin and General Dynamics Corp (GD.N:), which is dominant in armored vehicles and business jets.

[British] Navy Consider Female Submariner Plan

WesternMorningNews.co.uk, November 6, 2008

WOMEN could serve on submarines for the first time under plans being considered by military chiefs.

A shortage of trained crews and the looming design process for a new fleet of submarines have created the potential for female recruits to climb on board.

However, concern has been raised about the impact on morale if men and women were to serve together under the seas for months at a time.

Officially, women are banned because of a potential risk to an unborn foetus from contaminants in the submarine's atmosphere.

The Vanguard nuclear submarines are based in Plymouth, where they are re-fitted and refuelled. However, as the Ministry of Defence prepares to draw up designs for the new generation of boats carrying Trident nuclear missiles, the growing skills shortage could be eased by allowing women to sign up.

A National Audit Office report yesterday said shortages of various trades, including nuclear watch-keepers and medical assistants, will be exacerbated by the need for even more crews in the switchover from the Vanguard to the planned new fleet.

"Possible mitigation actions such as introducing female personnel are likely to have a major impact on both operating procedures and submarine design and therefore need to be taken while there is still scope for their incorporation," it said.

The Royal Navy is currently undertaking a two-year study to determine the likely impact of the change and to establish the design for the next submarines.

Plymouth Devonport MP Alison Seabeck said: "Anybody who has been on a submarine will appreciate just how difficult the living arrangements are.

"I suspect there are women who would have an interest in becoming submariners, but it is difficult. I don't think there is any question that women would be capable of being submariners, but there would be concerns about the size of the space available and how that would work for a long period of time.

"I would think that if the MoD is looking at this, then they will be consulting very widely within the force."

There are currently 3,680 women in the Royal Navy, having been allowed to serve on surface ships since 1990.

Military experts say the particular nature of being under the sea in incredibly enclosed spaces for long periods poses real problems.

A spokesman for the MoD said: "Work is under way to design, build and commission a new class of submarine to replace the existing boats.

"As part of the design work, consideration will be given to the possibility of women serving in the future."

But he insisted: "The current policy of excluding women from serving in submarines has not changed. The Royal Navy is in the process of conducting its five-yearly review of this policy."

Crew shortages in the submarine fleet have been well-publicised. Early this year it emerged the Royal Navy was offering £1,000 "bounties" to persuade young men to sign up.

Cash was also on offer for anyone in the forces who enlisted a submariner for at least 18 weeks of training with extra handouts for long-term sign-up.

Read Matt Chorley's blog at thisis westernmorningnews.co.uk/mattchorley.

Demilitarized Boats For Sale, Cheap

The Strategy Page, November 6, 2008

November 6, 2008: Shopping for a unique holiday gift? How about a submarine. There are several Whiskey Class Soviet subs available. Decommissioned in 1991, and built in the 1950s, these boats have sound hulls and are insurable. The price is right; $497,000 (delivery extra). Additional details at projectboats.com/whiskeysub.html. Discounts are available if you buy more than one.

The Whiskey class boats are basically modified versions of the German Type XXI U-boats. The German subs were 1,600 ton craft, and actually more capable than the 1,100 ton Whiskeys. But that's because the Russians just wanted a good, basic diesel-electric submarine for post World War II use. They got it with the Whiskey, and built 236 of them.

The Whiskeys offered here are demilitarized (torpedo tubes sealed and torpedo handling gear removed, along with other military equipment.) That leaves a lot of room for entertaining. Normally, a crew of 54 runs a Whiskey class boat, but about half as many

would be required for a civilian version. While it is possible to refurbish a Whiskey as a pleasure craft, you would still end up with a boat that provided a rough ride on the surface. Running submerged gets old real quick. Perhaps you could just tie it up at a dock, gut the interior, and turn it into a party room.

Not much chance of criminals buying one of these for use as a smuggling craft. The Whiskeys are notoriously noisy and easy for warships and anti-submarine aircraft to detect.

SUBVETS Serve Thanksgiving Dinner

On Thanksgiving Day, Nov. 27, SUBVETS will serve more than 850 traditional Thanksgiving dinners to SUBASE and Naval Submarine School Sailors far from home, as well as local police officers on duty and some of our senior citizens. This is the seventh year of this significant effort, fully supported and funded by the generosity of submarine veterans, local businesses, industries and citizens. Donations of money, food or volunteer assistance will be greatly appreciated in meeting this objective. Contact John Carcioppolo at thanksgiving@subvetsgroton.org or call (860) 514-7064.

Submarine Base Delivers Quality of Life for Single Sailors

New London celebrated the grand reopening of its Liberty Center with a ribbon cutting and open house for the base community Oct. 30.

The reopening marked the completion of a $1.2 million major renovation.

The new center is a steel and concrete example of Commander Navy Installations Command's and Commander Navy Region Mid-Atlantic's commitment to "the fighter" through the Shore Vision 2035 plan that recapitalizes bases and their infrastructure.

Spearheaded by the region and base's quality-of-life program, the project, which began in March, has now nearly doubled the Liberty Center's size and improved its amenities.

The center is home to the base Morale, Welfare, and Recreation (MWR) Department's Single Sailor Program. Comparable to a small college student union, it provides a facility for social activities in a relaxing, somewhat escapist, environment to its target patrons of young Naval Submarine School students.

The renovation expanded the center's usable space from 2,800 square feet to 5,400 square feet and filled it with brand new entertainment equipment and leisure opportunities, including three new pool tables; three new multifunction gaming tables; 14 new 36-inch and larger flat screen televisions and monitors connected to video gaming stations ranging from Playstation to Xbox 360 to Wii; more than 26 new computers equipped with free high speed internet; a new snack area and male and female restrooms; and a mini-movie theater with stadium style seating for 34 viewers.

"This is for you, the single Sailors who sit in your barracks room asking 'What is there to do?' This is what you do can do," said base commanding officer, Capt. Mark Ginda.

Recently arriving submarine school students were overwhelmingly impressed.

"This is like a Chuck E. Cheese for Sailors," said Seaman Recruit Ryan Stone who reported to the school just two weeks ago.

Bob Kydd, MWR director, was pleased with what the center's reopening means for its program.

"Now, we're double the size and excited to offer our Sailors double the fun," said Kydd.

For more news from Naval Submarine Base New London, visit www.navy.mil/local/subasenlon/.

Affordability 'Biggest Challenge'

High Volume, Stability, Commonality Key To Controlling Ship Costs

By Rebekah Gordon, Inside the Navy, November 3, 2008

PANAMA CITY BEACH, FL — Affordability remains the biggest challenge facing the Navy's shipbuilding program, and both service and industry leaders concurred recently that reforms that promote steady-state production, requirements stability, and commonality among design are key to reigning in skyrocketing costs.

"We've gotten ourselves in a position where the ships are costing too much, therefore we're buying fewer of them, and buying in less volume creates less stability in the industry for procuring the ships," Art Divens, the executive director for amphibious and auxiliary ships for the Navy's Program Executive Office Ships, said Oct. 21 at an expeditionary warfare conference here. "We've just got to slowly work our way out of that. I don't think there's a silver bullet to be had to cure the problems with shipbuilding."

Divens said that closer partnering with industry, using existing and commercial ship designs, fixed-price contracts and steady state production were all things the Navy needed to do to reduce costs.

"We find that once we get into a steady state of production, no matter what the ship is, we start to reap the benefits of the volume and the learning curve that you get by doing that," Divens said.

The Navy must also minimize changes to requirements once production is under way. Divens cited Strategic Sealift as a model program, in part because the requirements were clear and never changed.

"There are so many factors that feed into what's driving costs of shipbuilding and one of those is stability," he said. "And unless you finish the program the way you started it, you're not going to have a whole lot of success."

Revising the design and building process to better prepare for production should also be considered, according to Michael Toner, the executive vice president for marine systems at General Dynamics. He said building typically begins when design is far from finished, and that as the process moves forward, "cost reductions start to deteriorate."

"Once you start into the fabrication, changes and sequence changes start to get extremely expensive and really cause you a lot of problems," Toner told the audience. "And that's where we've been."

Instead, he said, the design-build process should start with collaborative conceptual requirement definition involving all stakeholders. A functional design should then be completed, with builder input, followed by a building strategy that can be locked in. Detailed design would come next, and then production planning.

Though Toner said General Dynamics has not yet achieved this, they've come closest. He cited the Virginia-class submarine — which had design about 50 percent complete before production and needed about 12,000 changes — as a significant improvement over its Seawolf-class predecessor, which had design only about 6 percent complete and had some 68,000 changes made.

A better design-build process, Toner said, could reduce the costs of a lead ship to what it currently costs for a third ship in the production line.

Michael Petters, corporate vice president and president of Northrop Grumman Shipbuilding, said that the Navy can additionally control shipbuilding costs by having more honest and upfront dialogue with stakeholders about potential risks. Risk, he said, is the difference between a ship's costs as estimated by the Navy, versus an oversight arm like the Congressional Budget Office.

"We ought to be talking about how do you go and identify that risk, mitigate that risk and put together the plans to take that risk. I think that we have to work on a language around this risk issue," Petters said. "In today's environment, you're not a hero for mitigating $5 billion worth of risk; you're a bum because you didn't mitigate the other $2 billion. And I think that that's really hurting us as an industry-government team working on trying to make the case to the taxpayers as to why we need a Navy and how much that Navy's going to cost us."

Furthermore, he said, the Navy and shipbuilders need to find more ways to use common hull platforms, design elements and construction processes. For example, he said, deck-edge elevators are on both carriers and big-deck amphibious ships, "but we don't build them the same."

"They're not designed to be the same, but they could be," he said.

Allison Stiller, the deputy assistant secretary of the Navy for research, development and acquisition, who participated in the panel via teleconference, reminded the audience that common parts are now required on Navy shipbuilding contracts. In addition, she said, the Navy is ensuring that common hull forms will be considered in analyses of alternatives for future shipbuilding programs.

She concurred that long production runs and program stability were key to controlling costs, and said that the Navy is trying to structure acquisition programs so that dialog with industry begins earlier.

Obama Team Considers New DOD Posts, Budget Challenges

By Jason Sherman, Inside Defense, November 5, 2008

Nov. 5, 2008 — President-elect Barack Obama's national security advisers — led by former Navy Secretary Richard Danzig — must assemble a new civilian Pentagon leadership team to take charge of two wars, determine how to reconstitute battle-worn forces while the federal budget and national economy faces severe pressure, and translate national security campaign promises into defense policy.

The Obama transition team, according to a briefing paper prepared for the campaign's national security advisory team, may consider a number of organizational changes to the Defense Department's civilian leadership that signal a break with priorities of the last eight years and point to the ascendancy of new issues that will affect defense strategy.

The incoming administration, according to the paper, may retool the intelligence under secretary office established by Donald Rumsfeld; create a new high-level energy security post; and divide the substantial portfolio of the assistant secretary for special operations/low-intensity conflict and interdependent capabilities.

It will also mull cuts to high-profile weapon systems, the paper states, naming three: national missile defense, the Airborne Laser and the Army's Future Combat Systems program.

The Office of the Secretary of Defense is preparing a fiscal year 2010 budget proposal that recommends a $57 billion topline increase. Tomorrow, it will consider requests by the military services to transmit to Congress before the end of December an FY-09 war-cost supplemental spending request to finance operations between next spring and next October, according to Pentagon sources.

"Despite massive defense spending, all four services have 'broken programs' — not enough resources in outyears to continue with their current programs," notes the paper prepared for the Obama transition team.

The paper also notes a goal long championed by many Democrats in Congress, including Obama, of consolidating all military spending into a single appropriations request.

"[When] will it be possible to transition off of supplemental funding for DOD?" asks the paper. "No 'smoke and mirror' budgeting."

"No supplementals," the briefing paper states, referring to the Bush administration practice of relying on supplemental appropriations to fund operations in Iraq and Afghanistan.

During the campaign, Obama pledged to withdraw combat forces from Iraq, enhance operations in Afghanistan, close the Guantanamo prison, rebuild National Guard and Reserve forces and to create a military suited to both irregular challenges as well as conventional operations.

He also pledged to support the Bush administration's goal to increase the size of the Army by 65,000 troops and the Marine Corps by 27,000, a goal that carries a hefty price tag and one that was established before the onset of a financial crisis that prompted the federal government to commit hundreds of billions of dollars to loosen credit markets and bail out financial institutions.

Defense Secretary Robert Gates, in cooperation with Adm. Michael Mullen, chairman of the Joint Chiefs of Staff, will work with Danzig to conduct the first wartime transfer of Pentagon civilian authority in four decades. In August, Gates established a task force to oversee the transition of key Pentagon accounts.

For the last few weeks briefing books detailing current policy, the status of key program and recommendations for the next Pentagon leadership team have been assembled in the office of Thomas Tesch, the task force chief, according to a Defense Department source.

Likewise, the Joint Chiefs of Staff were meeting early this week to finalize a briefing that details eight to 10 issues — largely dealing with policy — that require the immediate attention of the incoming administration, according to a second Pentagon source familiar with the classified briefing.

A complete presentation of Pentagon issues to Obama's transition team could come as soon as next week, these sources said.

Danzig will work with Obama to identify nearly 50 candidates for Pentagon posts that require Senate confirmation, the bulk of which are in the Office of the Secretary of Defense. Eight are in the Army and seven each are in the Air Force and Navy.

It remains to be seen how other defense-related campaign promises might result in new Defense Department policies, including Obama's pledge to improve the weapon system acquisition process to achieve cost savings and to "develop a strategy for determining when contracting makes sense," states the paper.

Right out of the gate, the new Pentagon leadership team is required to begin conducting a sweeping review of U.S. military force structure, global posture and composition — the 2010 Quadrennial Defense Review. The QDR is a vehicle for adjudicating an ongoing debate among the military services over whether to tilt investments toward preparing for more Iraq-like operations or to focus resources toward possible battles against near-peer adversaries.

Military officials involved in planning the Pentagon budget and six-year program plan say uniformed leaders are girding for a new round of belt-tightening that could distill investment decisions to a choice between additional ground forces — essential to counterinsurgency operations — and capital-intensive ships and aircraft key to conventional wars.

A long-term strategic vision, according to the briefing paper prepared for the Obama transition team, envisions "a more efficient and adaptive military well suited to irregular challenges that preserves nuclear deterrence and sufficient conventional warfighting capabilities."

Research and development investments would hedge for next-generation technologies and capabilities, according to the paper.

The Top Five

By Thomas Duffy, Inside Defense, November 4, 2008

A senior Pentagon advisory panel has issued a 66-page report laying out the top five issues the next commander-in-chief must put on his agenda. According to the Defense Science Board, these issues "could lead to future military failure" if left unresolved.

According to the report, "Defense Imperatives for the New Administration," those issues are: Developing the intelligence needed to confront terrorism, protecting and defending the homeland; maintaining the capability to project force around the world; bringing stability to states and regions; and supporting state and local authorities in providing domestic catastrophe relief.

On the intel front, the science board says the United States lacks the means to get the type of intelligence needed to get inside terrorist networks. No matter who is sitting in the Oval Office next year, he will have to confront the threat of terrorism, a threat the science board board contends the U.S. intelligence community is not fully equipped to handle.

The limiting factor in thwarting terrorists is learning their identity and location. Terrorists have gotten better at their trade craft — they are harder to detect and more lethal. In turn, we are spending a considerable amount on intelligence overall, and many intelligence community efforts have been redirected toward terrorism. Despite concerted efforts, we still lack the deep penetration required for actionable intelligence — both foreign and domestic.

Despite the millions of dollars the U.S. government spends annually on intelligence gathering, the science board contends the intelligence community does not know enough.

The number one issue in counterterrorism is that we are information limited. Many nostrums for improving intelligence in support of counterterrorism focus on 'connecting the dots' on the presumption that we have all the dots. We do not, nor are we sufficiently astute and aggressive in collecting them.

One improvement needed is to strengthen domestic intelligence, the report says.

The creation of the Director of National Intelligence responded, in part, to the September 11 attacks against our homeland and placed domestic as well as foreign intelligence within the purview of a single individual. Notwithstanding, the successive directors of national intelligence have been slow to embrace domestic intelligence and that must be remedied.

Iran Manufactured New Stealth Submarine: Report

Xinhua, November 4, 2008

TEHRAN — Iranian Defense Minister Brigadier General Mostafa Mohammad Najjar said on Tuesday that Iranian experts had produced new stealth micro submarines, vessels and lightweight aircraft, the English-language Press TV reported.

The new military developments come in line with Iran's supreme leader Ayatollah Ali Khamenei's order to develop exclusively made equipment to enhance the country's defense industry in face of possible threats, Mohammad Najjar said.

"Militarily-empowered countries can easily maintain their stability and independence," he said.

Khamenei on Saturday called for the production of exclusive military hardware for the country, asserting that in order to counter a potential attack, Iran should employ weapons the enemy is unfamiliar with.

The United States and its allies have accused Iran of trying to develop nuclear weapons under the cover of a civilian nuclear program. Iran denies the charges and insists that its nuclear program is for peaceful purposes only.

The Bush administration said it focused on diplomacy to try to resolve Iran's nuclear issue, but insisted it will take "no option off the table."

Norway Abandons Arctic Navy Base

Barents Observer, November 4, 2008

Amid its bid to step up military presence in the High North, Norway now leaves its Arctic navy base of Olavsvern.

The decision to abandon the base, located outside the city of Tromsø, has spurred protests from powerful groups in the Norwegian Armed Forces. They argue that the Norwegian parliament made a major mistake when it decided to close the base.

In a letter from the Norwegian Naval Society (Norges Sjømilitære Samfund), officers write that the base is of major importance and that it should be included in the Norwegian government High North strategy. Leader of the organisation, Mr. Bjørn Krohn, says to NRK that many Navy representatives now are angry with the decision to close down the base, the northernmost of Norway's navy bases.

-Since the Russian Northern Fleet has started to move around in the North, it would be a major mistake to abandon Olavsvern, the newest and most modern Navy base of Norway, he adds.

He is supported by Rolf E. Pedersen, a retired Navy general inspector. –The parliament's decision to close the base was a disaster. Both the submarine fleet and the new MTBs need the base, he says to NRK.

Also several politicians now say they want the parliament to reassess the issue. Parliament deputy from the Socialist Left Party, Mr. Bjørn Jacobsen, originally voted in favour of the decision, but now says he wants new discussion about the base.

The decision to close down the base comes in a period with top government focus on the High North. That includes also a high military presence in the region.

Since 2003, the small base has been subordinate unit of the bigger Haakonsvern base outside Bergen and no units have been permanently stationed there. The primary military task of the base has been to support Norwegian submarines and military torpedo boats operating outside northern Norway.

China's Potential For Military Aggression

By Hari Sud, UPI Asia, November 4, 2008

> *TORONTO, ON, Canada, — Can China risk a major war in Asia or even a military adventure beyond its borders? The answer is no. Why then is China building its military machine at an annual cost of more than US$60 billion? The answer: to intimidate its neighbors.*

Does the military build-up reflect misplaced Chinese reasoning that India can be dismissed as too orthodox to be taken seriously? The Chinese publication Global Times implied exactly that on Sept. 16. The answer is that China, in the last 50 years, has never taken India seriously.

Today, the Chinese military is a hugely expanded and modernized force, much stronger than what the United States faced in Korea in 1950, or India encountered in 1962, or the Russians faced in 1967 at the Ussuri River.

China's US$60 billion plus military expenditure supports the 2.4 million People's Liberation Army, 300,000 air force personnel and 200,000 servicemen in the navy. In addition, about US$30 billion a year is spent on a military industrial complex in central China, which is at the center of its three-tier modernization program. Although the military expenditure appears very large, it supports a very large manpower base and therefore is average.

China keeps about 1 million men on its eastern seaboard across from Taiwan, 200,000 at the Vietnamese border and about the same number in Tibet opposite India. Around 600,000 are based on the northern border to confront any Russian aggression and

the balance lie in central China as reserves. In the past two decades, China's military logistics have benefitted from greatly improved communications systems.

Although China appears to possess an intimidating force, it is simply too many military boots deployed across the country. In comparison, Taiwan with U.S. help, Russia with its own military power and India with Israeli, Russian and U.S. hardware are not sitting idly waiting for the Chinese to walk over them. Their combined military strength far exceeds China's. Their military hardware, excluding nuclear weapons and strategic missiles, is on par or better than China's. So China cannot pose a grave danger to them.

The Chinese army also has a few disadvantages. In Tibet, it is handicapped by a hostile population and uncertain communication lines. Against Taiwan, the presence of the U.S. 7th Fleet frustrates its ambitions. Against Vietnam, their 1979 victory brought such big losses of men and materials that China may not wish to fight again.

China's military doctrine is as ancient as China itself. It can be summed up in two strategies: on land, fight the enemy with overwhelming force; at sea, breach any naval blockade that undermines China's trade or security. Therefore, there is a big emphasis on building a navy. The current military budget roughly translates into 60 percent for the army, 25 percent for the navy and 15 percent for the air force.

Until about 10 years ago, China had a largely outdated military. In the last few years, China has begun a three-stage 50-year military modernization program. From 1990 to 2010, it will upgrade its military hardware with Russian and local supplies. The second stage, from 2010 to 2020, will see the introduction of modern weapons. Their induction will be accelerated allowing China to emerge as a leading power in the region. In the third stage, from 2020 to 2050, China hopes to become a world power.

The Chinese navy is the current focus of this modernization. In the last 10 years, it received 10 submarines and four modern destroyers, and several naval defense systems, all from Russia. Future plans include building aircraft carriers and matching fighter aircraft. Additional modernization includes landing ships and nuclear powered submarines, and long-term plans include building a navy capable of sailing long distances. The new naval base on Hainan Island is a challenge to the U.S. 7th Fleet.

Some military hardware in China's arsenal is copies of Russian products whose capacity is dubious and performance average. In the last 50 years, China increased its military force to offset the disadvantage of poor-quality military hardware.

The Chinese air force will dump all its second-generation aircraft, dating back to the 1960's, and replace them with SU-27s imported from Russia and local copies of F-16s dubbed the J-10. These fighter jets are capable except that their weapons systems, electronics and avionics are outdated. Without imported military technology, these cannot be improved. The import of AWACS from Israel would have changed the ball game. However, timely U.S. intervention prevented the technology transfer.

China's largest force, its army, has stayed fairly modern over the years. By improving mobility and communications it has a definite advantage over its neighbors. Capable of fighting short wars across its borders, it is a very potent force. The army with conventional missiles and cruise missiles could overwhelm its adversary. So its modernization is less important now.

China's neighbors are preparing to meet its threat, however. Taiwan, Japan and India are at the forefront of military modernization. India, with its annual US$24 billion defense expenditure and 1.3 million servicemen in the army, navy and air force, is comparable to China. Its modernization plan includes purchases valued at US$40 billion in the next five years.

India's advantage is its access to Israeli, French, Russian and now U.S. technology. Its Su-30 with Israeli avionics and Russian missiles is far more potent than China's Su-27. Its future contracts for fighter aircraft with Russian, U.S. or French interests, together with Israeli AWACS, will put it leagues ahead of China.

French and Russian submarines in India's hands together with two aircraft carriers and a major naval base in the western port of Karwar, similar to the one in Hainan, could disable any Chinese efforts to sneak into the Indian Ocean. Soon Indian nuclear-powered submarines will be prowling Chinese seas as well.

India's advantage is reduced if its main rival, Pakistan, is factored in. If Pakistan entered the fray on behalf of China, other powers would similarly join in to dissuade Pakistan.

Although China has a capable military in Tibet, India could disable its communications lines within days after the outbreak of hostilities. Therefore, China's military infrastructure close to the Tibetan border with India has its disadvantages.

The Taiwanese are always ahead of China's military buildup. China can never stage a successful military action across the Taiwan Strait as long as the U.S. 7th Fleet is around. The acquisition of U.S. Aegis naval ships could neutralize China's current advantages.

Fighting the Russians is an impossible dream for the Chinese, as they know all of China's military hardware and so can easily neutralize it.

In short, China's military modernization is largely intended to intimidate its neighbors. At the same time, the neighbors are keeping up with new military technologies to eliminate any large-scale Chinese military success.

China has a hawkish view of itself, but should not take its neighbors so lightly. It needs better advice on its military capabilities and better information about those of its neighbors.

Hari Sud is a retired vice president of C-I-L Inc., a former investment strategies analyst and international relations manager. A graduate of Punjab University and the University of Missouri, he has lived in Canada for the past 34 years.

Defense Chief Lauds Tridents

Gates Tells Kings Bay The Submarines Help Deter Nuclear War

By Gordon Jackson, The Florida Times-Union, October 31, 2008

ST. MARYS - Despite speculation the United States may cut its arsenal of nuclear missiles, Secretary of Defense Robert Gates said Friday he believes Trident submarines will continue to play an important role as a deterrent to nuclear war.

Gates discussed the future of the submarines during a question-and-answer session at Kings Bay Naval Submarine Base after his first tour of a Trident submarine, the USS Rhode Island.

"This is the most sustainable of our nuclear deterrents," he said of the fleet of submarines at Kings Bay and Bangor Naval Submarine Base in Washington state.

Gates said Trident subs are not just a deterrent to nuclear war but also a reason for allies not to develop their own nuclear missile defense systems.

"I think this ensures anyone who wishes us ill will to know there are submarines out there to protect our country," he said. "It also provides reassurance to our allies."

Gates spent more than 90 minutes aboard the Rhode Island talking to crew members about their upcoming deployment. The Rhode Island, like other Tridents, cannot be detected once it submerges.

Gates said he thanked the sailors for their professionalism and service to their nation.

Gates said he decided to visit Kings Bay because he was in the region attending a change-of-command ceremony in Tampa and wanted to take his first tour of a Trident submarine.

"I wanted to make sure I got here before I got out of office," he said.

Navy officials said Friday's visit was the first time a defense secretary has visited Kings Bay.

Cmdr. Mark Marty, the boat's captain, said Gates is the highest-ranking public official to ever tour a boat under his command. He said Gates was impressed with the boat and crew during his tour.

"He acted excited throughout the tour," he said. "The crew was very excited."

Navy To Hire 900 More Nuclear-Trained Sailors Over Next Two Years

Sub Officer Training To See Changes, Too

By Dan Taylor, Inside the Navy, November 3, 2008

Major changes are coming to the submarine fleet as the Navy plans to recruit 900 more nuclear-trained sailors over the next two years to deal with retention issues and tweak the training regimen of submarine officers, naval officials said at a conference last month.

"Senior leaders of the Navy . . . recognize we have an issue with retention," specifically with nuclear-trained enlisted sailors, Force Master Chief Mo Pollard of Submarine Pacific Fleet Command said Oct. 22 at the annual Naval Submarine League conference in McLean, VA.

Retaining sailors has been difficult because there is stiff competition for them from private companies, and the Navy needs to improve the quality of life for these sailors in order to keep them around, he said.

Senior officials met in August to address the issue, "and we came up with a whole bunch of things that we think that we need to do," Pollard said.

By adding 900 nuclear-trained sailors to the fleet, "we're going to be able to improve the quality of life for these sailors," he said, keeping them from heading to the private sector.

In order to reach that figure, the Navy will need to aggressively recruit those sailors and then train them, which means it will be about two years before they make it to the fleet, Pollard told Inside the Navy following his address.

The Navy cannot rely on current lower retention rates in the service, because they are being propped up by a weak economy, he said.

"With the unemployment rate, you can see we're having a better time retaining people," he said. "We need to take our lessons learned . . . [and] don't claim victory too soon on this retention piece, because the economy is helping us out right now."

Navy leaders hope that the new sailors will help keep retention rates low in the long run, Pollard added.

Meanwhile, the Navy is also seeking to make changes to the way submarine officers are trained, providing them with more hands-on experience and having more training at their home port to allow them to get settled, according to Vice Adm. Jay Donnelly, submarine forces commander, during his Oct. 23 address at the symposium.

"We're looking hard at the way we train our officers," Donnelly said, noting that a proposal is currently in the works. "It occurs to me that the sequence of that training is not quite right, and we're looking at some alternatives."

First of all, Donnelly said he wants to send officers to submarine hub Groton, CT, for a week to give them more hands-on experience with subs.

"We're going to show them what the light at the end of the tunnel looks like, because they're about to go through a long tunnel of nuclear-powered training," he said. "We're going to give them fire-fighting training and we're going to give them damage-control training and we'll take them onto a ship and show them what a submarine does."

That will "crystalize in their mind what the sacrifices they're about to make are all for," the admiral said. "I want to get them on a ship as fast as I possibly can."

Secondly, Donnelly said it is important for the Navy to transfer training responsibility to the officer's home port, allowing them to get settled with their families as quickly as possible and become familiar with their surroundings. Also, the service is looking to shrink the 10-week training course to about eight weeks.

"When they finish that course, they will be qualified," he said. "Then they go straight to their ship."

The admiral also noted that he would seek to improve the way the Navy prepares officers of ballistic missile submarines to oversee the maintenance and operation of the strategic weapon system on the sub.

"That is a very complex system, and we don't devote near the energy and attention to that system that we do to the operations and supervision of nuclear propulsion," he said. "I think we need to follow the naval reactors lead and increase the training for officers on SSBNs."

Ashes Of USS Indianapolis Survivor Buried At Sea

By Eric Talmadge, The Associated Press, November 1, 2008

YOKOSUKA, Japan (AP) — When the submarine USS Ohio surfaced at sea and Machinist Mate 1st Class Jason Witty emerged from the hatch to look around, he saw calm, blue water under a peaceful sky — perfect for the solemn task he was about to perform.

On the map, the Ohio was afloat in just another indistinguishable expanse of the Pacific Ocean. As Witty stood on deck holding a silver pitcher, the vessel was alone.

Just like the ill-fated USS Indianapolis, 63 years earlier.

The pitcher contained the ashes of Witty's grandfather, Boatswain Mate 2nd Class Eugene Morgan, who had survived the sinking of the Indianapolis — one of the worst tragedies for the U.S. Navy in World War II.

Morgan had died of a heart attack in June at age 87, just before Witty went to sea, and among his last wishes was the desire to be rejoined with his shipmates at roughly the same spot in the Pacific where the Indianapolis went down.

Witty, sitting in a wardroom of the Ohio at this Japanese port, recounted the Oct. 2 burial at sea, saying he had never participated in one before.

He had sheepishly asked one of the officers if his grandfather's wish could be granted. The request went up the chain of command to Capt. Dennis Carpenter, who quickly approved.

"I thought it would be an honor," Carpenter said. "And I wanted to make sure that we did it right. Sometimes on a submarine at sea, you just can't go topside. But everything seemed to be on our side."

In July 1945, the Indianapolis had just completed a secret mission to the tiny island of Tinian, carrying components for a new weapon — the atomic bomb. It would later be dropped on Hiroshima, Japan, in the world's first nuclear attack.

Because of its cargo, the Indianapolis had sailed to Tinian unescorted. Now, with that mission done, the cruiser was making its way back to Leyte, in the Philippines, with a crew of 1,196 aboard, including Eugene Morgan. Early on July 30, when the ship was still near the Marianas Islands, a Japanese I-58 submarine found the Indianapolis and launched six torpedoes, two ripping through its starboard side.

It took only 12 minutes for the Indianapolis to sink in the deadliest disaster at sea in U.S. naval history.

Morgan was asleep when the ship exploded into chaos.

"He was in his skivvies," Witty said. "He was tossed from his rack. There were fires. He got topside and the boat started to capsize."

Morgan jumped off the port side of the ship and slid down into the black sea.

"At some point, he found some food floating on the surface and swam toward it," Witty said. "But on the way, he was attacked by a shark."

It swam away before going in for the kill. For the rest of his life, Morgan carried scars on his backside from the attack.

Many of his shipmates weren't so fortunate. Morgan could hear their screams as they were attacked.

By the time help arrived five days later, 879 sailors were dead — from drowning, sharks, dehydration, or from injuries suffered in the attack itself. Morgan was one of only 317 to survive, floating on makeshift rafts, wreckage or clinging to each other.

The tragedy inspired the famous monologue in the movie "Jaws," in which the seasoned shark hunter played by Robert Shaw tells of the horrors of floating in the shark-infested waters while awaiting rescue.

Morgan was eventually saved when Navy seaplanes landed in the water and started to pluck out survivors. Some were hallucinating — they thought they were under attack by the Japanese again — and others were hysterical. Ships also arrived to assist in the rescue.

Only one more U.S. ship would be sunk before Japan's surrender in August 1945.

The Indianapolis itself has never been found.

Morgan, a Seattle firefighter after the war, kept the experience to himself for more than four decades.

Witty, of Puyallup, Wash., joined the Navy right out of high school. Two years later, his grandfather opened up.

"I knew that he was in the war, in the Navy, but he never really talked about it until after my grandmother died," Witty said. "One day I just got up the courage and he told me the story."

Once the door was open, Morgan began talking about the tragedy every chance he got. He was a frequent visitor at local schools and historical groups and took part in documentaries to make sure that the story of the Indianapolis would not be forgotten.

"I was worried that he would have bad feelings for me, being a submariner," Witty said. "It was a sub that sank his ship. But he never held that against me."

Morgan's burial at sea, on Oct. 2, was simple but somber.

Scripture was read, along with a eulogy written by another of Morgan's grandsons, Steven Wilson. The order was given for the firing detail to ready their rifles, and three shots rang out.

Turning to face the sea, Witty held the silver pitcher wrapped in a blue cloth over the side of the deck and spread the ashes to the wind.

"Just going to that spot on the chart, what went through my mind was what they must have gone through," Witty recalled. "They knew they were by themselves."

Modernizing The Fleet

NAVSEA's New Commander Canvasses Stakeholders To Chart Future Course

SEAPOWER Magazine, November 2008

(The following is a Seapower Magazine interview with VADM Kevin M. McCoy, Commander, Naval Sea Systems)

What are the key things you focused on in your first few months at NAVSEA?

McCOY: Earlier this summer, my predecessor, Vice Adm. Paul Sullivan, and I surveyed the fleet, Navy leadership in the Pentagon and our affiliated program executive offices to find out what they value most as NAVSEA customers. Based on their feedback, and in alignment with the goals and objectives of the NAVSEA Strategic Business Plan, which defines how we are going to overcome these challenges from 2009 through 2013, we focused on areas where we need immediate change. Some key examples are: *-Completing quality availabilities in naval shipyards on time and on cost.

* Identifying and achieving cost-reduction opportunities for work performed in the NAVSEA warfare centers

* Reducing cumbersome work practices employed in industrial availabilities.

* Revising the Virginia-class submarine maintenance plan to eliminate unnecessary inspections and work.

* Focusing on reducing overall acquisition cost, including taking a hard look at the cost versus benefit of what we are buying in terms of our technical specifications and requirements.

*-Pursuing commonality of hulls, systems and components across the Navy to reduce total ownership costs.

*-Cultivating a common identity for NAVSEA headquarters and field activities so we speak with one voice. Creating an organization capable of responding to work demand. signals generated by, our customers in a disciplined and cost-effective manner.

* Continuing to build a culture where diversity is a fundamental operating principle.

I believe in action and results. This 100-clay plan was the execution piece of the Strategic Business Plan. By the time NAVSEA leadership meets again in early December, our goal is to see measurable, positive results in each of these key areas.

What are the top challenges facing NAVSEA?

McCOY: Sustaining our current fleet in order to meet the chief of naval operations' goal of a 313-ship Navy. We can't get to 313 simply by building new ships. Seventy-five percent of our 313-ship goal is in the fleet today. We must ensure that our ships remain effective and ready and last their full design life, also, overcoming the rising cost of shipbuilding in an increasingly complex and expensive business environment while staying relevant in the fast-paced world of technology and meeting our future warfighting requirements.

Finally, and probably the most important challenge we lace, is how we recruit, develop and retain NAVSEA future leaders. The coin-petition for bright, young, diverse talent in America is fierce. Our challenge is figuring out how y become the -employer of choice" for the up-and-coming pool of talent.

How will NAVSEA contribute to the Navy achieving its goal of 313 ships?

McCOY: We need to take a hard look at exactly what we are requiring- and thus paying for, in terms of technical specifications and requirements. There are many areas where commercial industry practices and specifications are sufficient and will allow us to reduce costs with acceptable risk.

Getting the balance right in our specifications and requirements is another key focus area for NAVSEA. implementing concepts like commonality of hulls, systems and components across the Navy to reduce total owner-ship costs are the foundation of attaining a 313-ship Navy.

It is critical that the fleet maintains full operational readiness to meet warfighting requirements. One of the key focus areas in my first 100 days is in our Naval Shipyard Performance, particularly with Los Angeles-class submarine availabilities. Our goal is to complete quality availabilities, on time and on cost — every single one, with no exceptions. By going "hack to the basics," and focusing on fundamental deckplate execution, we can eliminate bottlenecks and optimize the work day.

NAV SEA needs to put more focus on ensuring that our surface ships stay effective through their full service life. We plan to stand up a team to work on surface ship class maintenance plans that will specify the right amount of maintenance at the right time in a ships life. We do this well today for submarines and aircraft carriers.

We must also reduce cumbersome work practices employed in industrial availabilities. A great example of this is the way we paint sea water tanks on submarines, surface ships and aircraft carriers. Traditionally, we have applied three coats of paint with a cure time of 24-36 hours between coats. Working with industry, we are now implementing a single coat paint that dries in about six hours. The cost and schedule savings from this one change is significant. We need to look at our high-cost processes across the board for ways that technology or the creativity of the broader industrial base can he harnessed to come up with a better solution.

In terms of budgeting, cost control, etc., what ideas will help the Navy reach its shipbuilding goals?

McCOY: We need to become better buyers across the board in the Navy. NAVSEA must take definitive steps to ensure our future ships and weapons systems are affordable to build, maintain and upgrade over their service lives. Our technical and program management communities need to become more proactive earlier. and throughout the acquisition timeline, to drive down the rising cost of shipbuilding.

To accomplish this we need to stimulate debate, understand the concept of operations and warfighting requirements, and compel decision-making with leadership early and often. We need to lay out the costs of requirements to Pentagon leadership so they see where the knees are in the costs curves relative to capability. then, we can have the debate relative to what we are willing to pay for specific capability.

The key to being able to do this effectively is to have greater integration with industry earlier in the acquisition process, and for sufficient time to ensure that the final design is locked clown and ready for efficient construction before the shipyard tradesmen start building the ship. This will allow the Navy to have a greater impact on design decisions and lead to increased commonality among ships and weapons systems, and lower procurement and lifecycle maintenance costs.

What significant technological trends do you see for future ships?

McCOY: the single most revolutionary technological advance in Navy ship combat systems over the past 35 years is open architecture. Through the use of open architecture, the Navy is able to enhance warfighting capability more affordably by eliminating the need to total regression-test the combat system's computer pro-gram when upgrades are introduced.

Open architecture decouples hardware from software and allows changes to software with minimal effect on the hardware, and vice versa. Publishing the interface standards (i.e. making them open) will increase competition, open opportunities for businesses outside the major Department of Defense vendors and provide: the best value to the government.

Second: The key to keeping our future fleet is modularity. In the past, we've had to retire ships — such as the first five Ticonderoga-class Aegis cruisers — early because they became too expensive to upgrade and reconfigure in a rapidly changing warfighting environment. the key to making 313 work is a balance between modernizing our current fleet and building our future fleet based on the concept of modularity.

With modularity embodied in such systems as the littoral Combat Ship's (LCS') three mission packages, we will be able to "plug and play" technology and make the capability scalable to future warfighting requirements. Combined with the concept of Open Architecture, we will be able to do this at a significantly lower cost.

Third, integrated power systems: Developments like the Rail Gun and high-power radars will drive the need to design ships with integrated electric drive, such as on DDG 1000. This allows the ship's installed prime movers to propel the ship very fast when needed, or provide significant amounts of electric power to the mission systems at slower speeds. This area is so important that, over the last two years, NAVSEA has worked closely with industry, academia and the Office of Naval Research to develop a roadmap ... to ensure that we harness our collective efforts in this area.

Fourth, fuel efficiency: The Navy is pursuing fuel efficiency technology enablers, and we need to do more in this area. We are working to develop a hybrid electric-drive system that can be installed as a means to further reduce fuel consumption on Arleigh Burke-class guided-missile destroyers. The proposed hybrid electric-drive system will incorporate electric motor and energy storage technologies, enabling in-service destroyers to operate with greater efficiency.

What benefits will the Navy accrue from the DOG 1000 if the program is limited only a few ships?

McCOY: There are 10 promising major technologies in the DDG 1000 program that have potential utility in future ships, but have yet to be assessed in operational environments. Completing the ships under contract will allow that assessment, particularly that of the tumblehome hull form, low radar cross-section. dual-band radar and minimal manning enhancements.

Are the prospects still promising for increasing Virginia-class SSN production to two per year? McCOY: 'The prospects are very promising. "The Navy is now negotiating an eight-ship contract that will have two Virginia-class submarines in fiscal years 2011, 2012 and 2013.

We have made great progress with reducing time. and cost of successive Virginia-class submarines. New Hampshire, our fifth Virginia-class delivery, was delivered more than eight months early and built with 1.5 million Fewer man-hours and '$150 million less cost comparable recurring cost in fiscal year 2005 dollars] than its two predecessors.

What industrial base issues concern you?

McCOY: Maintaining a skilled and capable industrial base is a delicate balancing act that requires constant assessment and management. We must maintain the Navy's four public shipyards to he able to support and modernize primarily our submarines and aircraft carriers. We need to continue to recruit, train and retain a talented and motivated work force to accomplish this vital mission today, tomorrow and into the future.

Likewise, a healthy and viable private sector industrial base is also required. Although the United States is a premier builder of military ships, limited commercial shipbuilding and ship repair work is accomplished in the United States. This requires constant

attention to make sure that the private sector, including parts and component manufacturers, maintain both the trained work Ionic and capable facilities to support naval work.

Are fixed-price ship contracts the norm for the foreseeable future?

McCOY: While many of our shipbuilding contracts lend themselves to fixed-price terms, others do not. For lead ships, (i.e., DDG 1000, CVN 78, LCS 1 and 2) where risk cannot be predicted with reasonable certainty, a cost-type contract is more appropriate. Fixed-price con-tracts are appropriate when the risk involved is minimal or can be predicted with an acceptable degree of certainty. This is why for LCS fiscal years 2008/2009 follow-on ships, fixed-price type contracts will be used.

How are the various warfare enterprises benefiting from NAVSEA's participation?

McCOY: Anything becomes a better product with increased collaboration: it brings together a larger talent pool of ingenuity to bear. A recent example of success was the Surface Warfare Mission Package rollout for LCS this past July. It was a combined effort between Naval Surface Warfare Center Dahlgren, Program Executive Office for littoral and Mine Warfare, the Army and industry; in collaboration with the Surface Warfare Enterprise, to keep the program on schedule and on budget.

Never before has the Navy built a ship, complemented with three modular mission packages, that is as versatile and responsive to emerging warfighting requirements.

High Volume, Stability, Commonality Key To Controlling Ship Costs

Affordability 'biggest challenge'

By Rebekah Gordon, Inside the Navy, November 3, 2008

PANAMA CITY BEACH, FL — Affordability remains the biggest challenge facing the Navy's shipbuilding program, and both service and industry leaders concurred recently that reforms that promote steady-state production, requirements stability, and commonality among design are key to reigning in skyrocketing costs.

"We've gotten ourselves in a position where the ships are costing too much, therefore we're buying fewer of them, and buying in less volume creates less stability in the industry for procuring the ships," Art Divens, the executive director for amphibious and auxiliary ships for the Navy's Program Executive Office Ships, said Oct. 21 at an expeditionary warfare conference here. "We've just got to slowly work our way out of that. I don't think there's a silver bullet to be had to cure the problems with shipbuilding."

Divens said that closer partnering with industry, using existing and commercial ship designs, fixed-price contracts and steady state production were all things the Navy needed to do to reduce costs.

"We find that once we get into a steady state of production, no matter what the ship is, we start to reap the benefits of the volume and the learning curve that you get by doing that," Divens said.

The Navy must also minimize changes to requirements once production is under way. Divens cited Strategic Sealift as a model program, in part because the requirements were clear and never changed.

"There are so many factors that feed into what's driving costs of shipbuilding and one of those is stability," he said. "And unless you finish the program the way you started it, you're not going to have a whole lot of success."

Revising the design and building process to better prepare for production should also be considered, according to Michael Toner, the executive vice president for marine systems at General Dynamics. He said building typically begins when design is far from finished, and that as the process moves forward, "cost reductions start to deteriorate."

"Once you start into the fabrication, changes and sequence changes start to get extremely expensive and really cause you a lot of problems," Toner told the audience. "And that's where we've been."

Instead, he said, the design-build process should start with collaborative conceptual requirement definition involving all stakeholders. A functional design should then be completed, with builder input, followed by a building strategy that can be locked in. Detailed design would come next, and then production planning.

Though Toner said General Dynamics has not yet achieved this, they've come closest. He cited the Virginia-class submarine — which had design about 50 percent complete before production and needed about 12,000 changes — as a significant improvement over its Seawolf-class predecessor, which had design only about 6 percent complete and had some 68,000 changes made.

A better design-build process, Toner said, could reduce the costs of a lead ship to what it currently costs for a third ship in the production line.

Michael Petters, corporate vice president and president of Northrop Grumman Shipbuilding, said that the Navy can additionally control shipbuilding costs by having more honest and upfront dialogue with stakeholders about potential risks. Risk, he said, is the difference between a ship's costs as estimated by the Navy, versus an oversight arm like the Congressional Budget Office.

"We ought to be talking about how do you go and identify that risk, mitigate that risk and put together the plans to take that risk. I think that we have to work on a language around this risk issue," Petters said. "In today's environment, you're not a hero for mitigating $5 billion worth of risk; you're a bum because you didn't mitigate the other $2 billion. And I think that that's really hurting us as an industry-government team working on trying to make the case to the taxpayers as to why we need a Navy and how much that Navy's going to cost us."

Furthermore, he said, the Navy and shipbuilders need to find more ways to use common hull platforms, design elements and construction processes. For example, he said, deck-edge elevators are on both carriers and big-deck amphibious ships, "but we don't build them the same."

"They're not designed to be the same, but they could be," he said.

Allison Stiller, the deputy assistant secretary of the Navy for research, development and acquisition, who participated in the panel via teleconference, reminded the audience that common parts are now required on Navy shipbuilding contracts. In addition, she said, the Navy is ensuring that common hull forms will be considered in analyses of alternatives for future shipbuilding programs.

She concurred that long production runs and program stability were key to controlling costs, and said that the Navy is trying to structure acquisition programs so that dialog with industry begins earlier.

CNO: Navy To 'Aggressively' Pursue Unmanned Tech In Coming Years

Navy culture an obstacle, Roughead says

By Dan Taylor, Inside the Navy, November 3, 2008

The Navy needs to "move aggressively" on unmanned vehicles, which will become a higher priority for the sea service in the coming years, Chief of Naval Operations Adm. Gary Roughead said recently.

"[An] area that you will be hearing from me on in the next couple years in increasing frequency is unmanned underwater vehicles," Roughead said Oct. 22 during his address to the annual Naval Submarine League symposium in McLean, VA. "I will say the same thing of unmanned aerial vehicles as well."

He added that advances in unmanned technology is hindered "more by our culture than it is by technology," and it is time to focus more on such capabilities.

"We have to stretch ourselves out and reach ahead and bring the unmanned capability into being in a very, very aggressive way," the admiral said.

Roughead was asked during the question-and-answer session where he saw UUVs having the most mission impact: lethal; intelligence, surveillance and reconnaissance (ISR); or some other area.

"I think clearly the first area that I would see us being able to derive a benefit would be in the ISR realm," he said. "I think those are the areas that would be where I would see some of the initial accelerations taking place."

Capt. Paul Siegrist, program manager for unmanned maritime vehicles, echoed the admiral's push for implementing unmanned capability into the fleet in an Oct. 10 phone interview with Inside the Navy, noting that the best way to accomplish it was not to rely on game-changing technology but to use capabilities currently available to the Navy so they can evolve with the fleet.

"The long-term transition of unmanned maritime vehicle technology into the fleet . . . needs to be matured with operating concepts on how to integrate those unmanned maritime vehicles [and] mainstreaming them into a naval capability," he said.

There have been recent advancements in unmanned technology. In December 2007, the sea service conducted the first demonstration of a submerged launch and recovery of a UUV on a submarine. Moreover, Raytheon recently demonstrated an unmanned aerial system that could be deployed from a submerged submarine.

Raytheon Demonstrates Launch Of UAs From Under Water

Technology To Be Applied To Submarines

By Dan Taylor, Inside the Navy, November 3, 2008

Raytheon has successfully demonstrated an unmanned aerial system that can be launched from submerged submarines, the company announced Oct. 24.

The program, called submarine over-the-horizon organic capabilities (SOTHOC), is a government-industry partnership that "simulated the submarine launch of a specialized UAS for collection of intelligence, surveillance and reconnaissance information in a complex littoral environment," according to a Raytheon press release.

The UAS was tested aboard a surface ship, where it was deployed over the side, sank to 80 feet, gained positive buoyancy, floated to the surface, stabilized in the sea, aligned into the wind and "then launched an inert representative UAS at precise orientation and velocity," the release states.

"In future demonstrations, we will deploy a UAS from an actual submerged submarine and evaluate its performance in the maritime interdiction mission," said Ken Pederson, vice president of advanced programs for Raytheon Missile Systems, in the release.

The company will run another test using "an actual UAS instead of a UAS mass model" this month at Point Mugu, CA, said Jeff Zerbe, SOTHOC program director for Raytheon Missile Systems advanced programs in Tucson, AZ, in an Oct. 30 e-mail response to questions from Inside the Navy.

In January, the company plans to launch a UAS from a submerged submarine, "probably a Los Angeles-class boat off Hawaii," Zerbe said.

The concept arose about four years ago when Submarine Force Pacific Fleet and Submarine Forces expressed interest in the concept, and said they would consider funding a demonstration, Zerbe said. Raytheon's approach was selected about 18 months ago stemming from a broad agency announcement for concept submissions.

Zerbe said the capability could be fielded anytime after the completion of phase two of the program and a military utility assessment is conducted, "perhaps mid-2009."

"SOTHOC could get fielded shortly after that point if funding is available," he added.

He noted that the submarine would communicate with the UAS using antennas currently on the ship, which would have to be at periscope level.

The UAS "will be a low cost, expendable asset, per the requirement," he said.

SOTHOC will be an improvement for a submarine's UAS capabilities because the sub will no longer rely on anyone else and it will not have to expose itself by surfacing, Zerbe noted.

The system will be deployed from the submarine's trash disposal unit, and the UAS is ejected from the launch tube using compressed air when it reaches the surface. The system requires no modifications to the sub, Zerbe said.

The Navy is interested in technologies that will allow submarines to stay submerged rather than risk exposure by surfacing. In December 2007, the Navy conducted the first submerged launch and recovery of an unmanned undersea vehicle.

Democrats Cool to Nuclear Stockpile Modernization

By Josh Rogin, Congressional Quarterly, November 3, 2008

The drive to modernize the nation's nuclear stockpile faces an uphill climb in Congress next year, as Democrats intend to hold off their support for the program for the time being.

Defense-minded Democratic lawmakers in both chambers reacted cautiously to a new call from Defense Secretary Robert M. Gates for renewed support of the Reliable Replacement Warhead program, the Bush administration's effort to replace the aging Cold War nuclear stockpile. Since assuming the majority in 2007, Democrats have consistently cut requested funding for the program and they remain skeptical about its wisdom as opposed to other initiatives to maintain existing nuclear stores.

Gates, in an Oct. 28 speech at the Carnegie Endowment for International Peace, implored Congress to support the program. He framed it as a needed component of maintaining long-term nuclear deterrence against both rising powers and rogue states.

"While we have a long-term goal of abolishing nuclear weapons once and for all, given the world in which we live, we have to be realistic about that proposition," Gates said. "The program would reinvigorate and rebuild our infrastructure and expertise, and it could potentially allow us to reduce aging stockpiles by balancing the risk between a smaller number of warheads and an industrial complex that could produce new weapons if the need arose."

Democrats have always been skeptical of the Bush administration's claim that building new nuclear warheads will allow the nation to actually reduce the size of the overall stockpile. They also see the program as another in a long line of Bush administration attempts to expand the variety of nuclear weapons and perhaps lower the threshold for their use.

"I oppose RRW because after a number of classified briefings, I have come to the conclusion that it is essentially the production of a new nuclear weapon," reacted Sen. Dianne Feinstein, D-Calif., an appropriator who has worked to slow the program over the last two years. "My views are not inviolate, but we know that the Bush administration's goal was to reopen the nuclear door."

She and other Democrats in Congress have been successful in thwarting similar efforts, such as the development of lower yield nuclear weapons and other controversial devices, such as a nuclear "bunker buster" bomb.

But Gates argued that the replacement warhead program is different from those initiatives.

"Let me be clear: The program we propose is not about new nuclear capabilities — suitcase bombs or bunker-busters or tactical nukes," he said. "It is about safety, security and reliability."

The program began during Bush's first term and is managed by Energy Department's National Nuclear Security Administration.

Funds also are requested annually in the Navy's research and development budget.

Congress appropriated about $85 million for the RRW program through fiscal 2008, but cut all requested funding — about $33 million — for the program next year. The fiscal 2009 defense authorization bill (PL 110-417) redirected the funding towards other programs.

The defense section of the fiscal 2009 omnibus spending bill (PL 110-329) cleared by Congress in September eliminated the Navy's entire $23 million of requested funding for the program.

The remaining $10 million was zeroed out in both the House and Senate versions of the fiscal 2009 energy and water appropriations bill, but that bill was never completed.

Leading defense authorizers have held back a final decision on the program, awaiting more comprehensive independent analysis and the guidance of the next president.

Sen. Carl Levin, D-Mich., the chairman of the Senate Armed Services Committee, has been supportive of research and analysis, but believes that more information is needed before a firm decision is made whether to pursue the program, his aide said.

Many Democrats have left the door open while simultaneously halting immediate action.

"If we are going to maintain a smaller level of weapons as we work toward their elimination, and we have the opportunity to make them safer and more secure without testing, that is a proposal worth exploring," said Rep. Ellen O. Tauscher, chairwomen of the House Armed Services Strategic Forces subcommittee, which oversees the program.

Republicans in the New Mexico delegation, including outgoing Sen. Pete V. Domenici, R-N.M., have been vocal supporters, along with other conservatives who believe that by not acting, the United States is opening the door for nuclear competitors and adversaries.

"If the [United States] wants to avoid war — and we do — we must have an effective means to deter aggression against America and our allies," said Rep. Trent Franks, R-Ariz., a prominent member of Tauscher's subcommittee. "As history has demonstrated so often, weakness is provocative."

Both presidential candidates have indicated they will take a cautious approach to moving ahead with the program.

Senator Barack Obama, D-Ill., has not weighed in on the program during the campaign, but is likely to wait for more information before making his decision.

And while Sen. John McCain, R-Ariz., largely agrees with Gates' call for robust nuclear deterrence, he acknowledges the risks and concerns associated with building new warheads under the program.

"Senator McCain has made clear that he would only support the development of any new type of nuclear weapon that is absolutely essential for the viability of our deterrent, that results in making possible further decreases in the size of our nuclear arsenal, and that furthers our global nuclear security goals," said his top national security adviser, Randy Schuenemann.

The program also faces difficulty because it does not enjoy as much Republican support in Congress as some other strategic programs, such as ballistic missile defense, said John Isaacs, executive director of the Council for a Livable World.

"For Republicans, missile defense is an ideological totem, and they will fight tooth and nail for that. But when it comes to RRW, it's just not the same," Isaacs said.

There will be two major studies of nuclear weapons issue next year, one by the Pentagon and one by the independent commission headed by former secretaries of Defense William Perry and James Schlesinger.

But in the end, the next president will set the agenda for the program, according to Isaacs, when he decides whether or not to ask for RRW money in his fiscal 2010 budget request.

"The new president, no matter who he is, will take a look at all these issues," he said. "Either way, I would expect Congress to be resistant."

Moammar Kadafi Looking To Improve Ties With Russia

By Sergei L. Loiko, Los Angeles Times, November 2, 2008

Reporting from Moscow — In his first visit to Russia since Soviet times, Libyan leader Moammar Kadafi on Saturday lauded a new era of cooperation between the two countries, as he sought to take advantage of a recent chill between Moscow and Washington.

"Unfortunately, in the past our relations have been mostly focused on military cooperation and politics," Kadafi said as he met with President Dmitry Medvedev. "There was no cooperation in the civilian sectors. Now, the Russian companies have already begun to work in various sectors of the Libyan economy. We consider especially important our cooperation in oil and gas."

But Kremlin sources and experts alike agree that Kadafi's visit to Moscow is intended not only to seek cooperation on energy but also to reach an agreement on buying Russian weapons to boost Libya's defenses.

The Russian Interfax agency Friday quoted unnamed Kremlin sources as saying that Libya was interested in buying antiaircraft missile systems, two squadrons of fighter jets and a variety of other military hardware, including a diesel submarine.

A spokesman for Russian state weapons exporter Rosoboronexport, Vyacheslav Davidenko, neither confirmed nor denied the report. "The military cooperation between Libya and Russia has always existed," Davidenko said. "It is continuing now, but I can't disclose the amount or the sums involved."

Kadafi, whom President Reagan once called a "mad dog," has also reached out to the United States. The Bush administration restored full diplomatic ties with Libya in 2006, rewarding the longtime foe for pledging to give up terrorism and unconventional weapons. In September, Kadafi welcomed Secretary of State Condoleezza Rice to his high-security compound in Tripoli, the Libyan capital.

Russian defense expert Alexander Golts said that Kadafi, like Venezuelan President Hugo Chavez before him, was trying to take advantage of the rift in Russian-U.S. relations, in the wake of the Moscow's incursion into Georgia, to beef up his military muscle.

"It is clear that the so-called rogue states . . . are trying to use the recent dramatic split in Russian-U.S. relations over the recent war in Georgia for their own ends," Golts said.

He pointed out that Libya may profit more from the situation than Russia and the U.S. would prefer: "In a situation when in the heat of the growing confrontation Russia and the United States are beginning to increasingly flirt with Libya, it is quite possible that the tail may wag the dog."

The New Cold War: Reviving The U.S. Presence In The Arctic

By Ariel Cohen, Ph.D., Lajos F. Szaszdi, Ph.D., and Jim Dolbow, Heritage Foundation, October 30, 2008

The Arctic is quickly reemerging as a strategic area where vital U.S. interests are at stake. The geopolitical and geo-economic importance of the Arctic region is rising rapidly, and its mineral wealth will likely transform the region into a booming economic frontier in the 21st century. The coasts and continental shelf of the Arctic Ocean are estimated to hold large deposits of oil, natural gas, and methane hydrate (natural gas) clusters along with large quantities of valuable minerals.

With the shrinking of the polar ice cap, extended navigation through the Northwest Passage along the northern coast of North America may soon become possible with the help of icebreakers. Similarly, Russia is seeking to make the Northern Sea Route along the northern coast of Eurasia navigable for considerably longer periods of the year. Opening these shorter routes will significantly cut the time and costs of shipping.

In recent years, Russia has been particularly active in the Arctic, aggressively advancing its interests and claims by using international law and by projecting military might into the region.

Despite the Arctic's strategic location and vast resources, the U.S. has largely ignored this region. The United States needs to develop a comprehensive policy for the Arctic, including diplomatic, naval, military, and economic policy components. This should include swiftly mapping U.S. territorial claims to determine their extent and to defend against claims by other countries. With oil and gas prices recently at historic highs in a tight supply and demand environment, the rich hydrocarbon resources in the Arctic may bring some relief to consumers. These resources, especially the hydrocarbons, also have the potential to significantly enhance the economy and the energy security of North America and the world.

The Arctic's Vast Untapped Resources

The U.S. Geological Survey estimates that the Arctic might hold as much as 90 billion barrels (13 percent) of the world's undiscovered oil reserves and 47.3 trillion cubic meters (tcm) (30 percent) of the world's undiscovered natural gas. At current consumption rates and assuming a 50 percent utilization rate of reserves, this is enough oil to meet global demand for 1.4 years and U.S. demand for six years. Arctic natural gas reserves may equal Russia's proven reserves, the world's largest.[1]

The Russian Ministry of Natural Resources estimates that the underwater Arctic region claimed by Russia could hold as much as 586 billion barrels of unproven oil reserves.[2] The ministry estimates that proven oil deposits "in the Russian area of water proper" in the Barents, Pechora, Kara, East Siberian, Chukchi, and Laptev Seas could reach 418 million tons (3 billion barrels) and proven gas reserves could reach 7.7 tcm. Unexplored reserves could total 9.24 billion tons (67.7 billion barrels) of oil and 88.3 tcm of natural gas.[3] Overall, Russia estimates that these areas have up to 10 trillion tons of hydrocarbon deposits, the equivalent of 73 trillion barrels of oil.[4]

In addition to oil and gas, the Arctic seabed may contain significant deposits of valuable metals and precious stones, such as gold, silver, copper, iron, lead, manganese, nickel, platinum, tin, zinc, and diamonds. The rise of China, India, and other developing countries has increased global demand for these commodities.[5]

Alaska's North Slope. Alaska's North Slope contributes significantly to U.S. oil production and could supply more. The North Slope is the region of Alaska from the Canadian border on the east to the Chukchi Sea Outer Continental Shelf (OCS) on the west. It includes the Chukchi Sea OCS, the Beaufort Sea OCS, the Arctic National Wildlife Refuge (ANWR), the Central Arctic (the region between the Colville and Canning Rivers), and the National Petroleum Reserve, Alaska.[6]

Between 1977 and 2004, the Prudhoe Bay oil field on the North Slope produced more than 15 billion barrels of oil. By 1988, Prudhoe Bay was accounting for more than 25 percent of U.S. crude oil production. However, Prudhoe Bay oil field is currently in steep decline.[7] A U.S. Department of Energy report found that the North Slope has potentially 36 billion barrels of oil and 3.8 tcm of natural gas, close to Nigeria's proven reserves. The report also estimates that the Chukchi Sea OCS and the Beaufort Sea OCS hold combined energy reserves of 14 billion barrels of oil and about 2 tcm of natural gas.[8]

Furthermore, these reserves are even more attractive because their development is less limited by federal, state, and local legislation, as is the case with ANWR, and are thus more accessible to drilling.[9]

To enhance U.S. energy security, America should expand domestic oil production. America remains the only oil-producing nation on earth that has placed a significant amount of its reserves out of reach.[10] Until recently, potentially large U.S. natural gas deposits have been off limits.[11] For instance, ANWR holds potential reserves of about 10 billion barrels of petroleum.[12] Such reserves could lead to an additional 1 million barrels per day in domestic production, which could be transported south through the Trans-Alaska Pipeline, which has a spare capacity of 1 million barrels per day. An additional 1 million barrels per day would save the U.S. $123 billion in petroleum imports, create $7.7 billion in new economic activity, and generate 128,000 new jobs.[13]

Methane Hydrates. Large methane hydrate deposits are located on the deep seabed of the Arctic Ocean.[14] Methane hydrates are a solid form of natural gas and have 3,000 times the concentration of methane found in the atmosphere.[15] While no technology currently exists to mine methane clusters, the capability appears to be just over the horizon. The U.S. and Japan have agreed to cooperate in researching and developing commercial methane hydrate processing with the goal of selling gas from methane hydrates by 2018.[16] The South Korean Ministry of Energy has also announced that it will work with the U.S. in exploring and developing methane hydrate deposits to develop a commercially viable energy source. Seoul is also hoping to participate in the U.S.-sponsored Alaska North Slope project in 2009 to test the viability of using methane hydrates as an energy source.[17]

Global Oil Supply and the Demand "Crunch."

Arctic oil and gas resources have become increasingly important given the tight energy market. Escalating demand for energy in 2001–2008, stagnating supply, political instability, growing resource nationalism, terrorism, and ethnic conflict have combined into a perfect storm of a global supply and demand crunch.[18] This crunch has been reflected in high oil prices ($147 per barrel in July). While oil prices have since retreated to less than $70 per barrel due to the financial crisis, global energy markets are expected to remain tight for the long-term as the fundamentals remain largely the same (i.e., rising demand in emerging markets and flattening supply). While these trends bode ill for energy security, the resources in the Arctic offer a glimmer of hope.

U.S. Energy Supplies. Developing oil deposits in the Arctic is strategically important because the region is not beset by religious, ethnic, or social strife and resource nationalism that plague oil-producing countries in the Middle East, West Africa, and Latin America. One way to reduce U.S. dependency on foreign oil is to develop Arctic oil fields. Such development would lower prices in the international oil market, even after accounting for the time lag for bringing new oil fields online. Moreover, the rich oil and gas deposits in Alaska's North Slope and in the U.S. offshore Arctic territories could further increase U.S. energy supply by guaranteeing availability of additional domestic energy supplies in the time of a national emergency.[19]

Liquefied Natural Gas.

U.S. demand for natural gas is growing because generating electric power using natural gas is cleaner and more efficient than with coal or oil. Natural gas production in the U.S. and Canada has not kept pace with the rising demand and is "flattening out" or declining.[20]

In 2004, former Chairman of the Federal Reserve Alan Greenspan saw increased imports of liquefied natural gas (LNG) as a solution, or "price-pressure safety valve," to reduce prices and fill the gap from diminishing North American gas supply.[21] However, LNG imports have so far proven expensive in meeting growing demand. The price of natural gas abroad is nearly double the price in the U.S., so LNG flows to other buyers who are willing to pay higher prices, such as in Japan.

As Royal Dutch Shell's executive director of gas and power Linda Cook suggested, U.S. domestic production of natural gas could run 15–20 billion cubic feet per day below domestic demand by 2025.[22] However, augmented LNG production from the Arctic could help to meet future demand and to reduce gas prices in the domestic market, which would benefit industry and consumers.

Opening the Arctic Outer Continental Shelf. In a timely move prompted by the current demand, the Mineral Management Service in the U.S. Department of the Interior has started offering oil and gas lease sales for drilling rights in the Outer Continental Shelf in the Chukchi and Beaufort Seas. For example, the Chukchi Sea Lease Sale in February 2008 was the first OCS lease sale in 17 years.[23]

International corporations are now flocking to the High North. BP is developing a drilling project known as Liberty in the OCS. In February 2008, Royal Dutch Shell paid $2.1 billion for 275 lease blocks in the Chukchi Sea Lease Sale 193. At the February 2008 lease sale, Norway's StatoilHydro and Italy's ENI were the high bidders on a number of blocks. In total, seven companies participated in the Chukchi Sea Lease Sale, which spanned an area covering 5,354 blocks.[24] In the future, these and other projects on the Arctic Outer Continental Shelf could deliver gas to the lower 48 states through the Trans-Alaska Pipeline and the Canadian Mackenzie Valley Pipeline.

U.S. Claims in the Arctic

The U.S. relies on its sovereign power and diplomacy when pursuing territorial claims in the Arctic. The United States is not a party to the United Nations Convention on the Law of the Sea Treaty (LOST) and therefore is not bound by any procedures and determinations concluded through LOST instruments. Instead, the U.S. is pursuing its claims "as an independent, sovereign nation," relying in part on Harry S. Truman's Presidential Proclamation No. 2667, which declares that any hydrocarbon or other resources discovered beneath the U.S. continental shelf are the property of the United States.[25] The U.S. can defend its rights and claims through bilateral negotiations and in the multilateral venues such as through the Arctic Ocean Conference in May 2008, which met in Ilulissat, Greenland.

Many have argued, including the Bush Administration, that the U.S. will not have leverage or a "seat at the table" to pursue or defend its Arctic claims on condition that the U.S. is not a party to LOST. However, U.S. attendance at the conference in Ilulissat significantly weakened this argument. Even though the U.S. is not a LOST party, other Arctic nations "are unable to assert credible claims on U.S. territory in the Arctic or anywhere else in the world" because President Truman already secured U.S. rights to Arctic resources with his proclamation.[26]

Yet to protect its rights, the U.S. needs to know how far its claims stretch into the Arctic Ocean. The U.S. has been mapping the bottom of the Arctic Ocean and the Outer Continental Shelf since 2003.[27] Mapping is essential to determining the extent of the U.S. OCS and determining whether the U.S. has any legitimate claims to territory beyond its 200-nautical-mile exclusive economic zone. Despite ongoing U.S. efforts to chart the bottom of the Arctic Ocean, mapping efforts have been inadequate. According to a National Research Council report in 2007, the U.S. continental shelf and the Northwest Passage have not yet been entirely mapped.[28] Mapping is also important for disputing any conflicting claims by other Arctic nations. For example, the U.S. and Canada have likely claimed some of the same parts of the continental shelf.[29] Mapping data will also help to determine whether Russian claims conflict with U.S. and Canadian claims.

The expedition undertaken by the icebreaker USCGC Healy in the Chukchi Sea focused on surveying an area 400 to 600 miles north of Alaska and cost about $1.2 million—a pittance compared to the billions of dollars of Arctic natural resources that are at stake. The survey indicated that the foot or lowest part of the Alaskan continental shelf stretches more than 100 miles beyond what was previously thought, thus expanding the U.S. claim.[30]

The U.S. requires a modern flotilla of icebreakers to conduct mapping and to sustain U.S. claims. The U.S. currently has only three icebreakers that belong to the Coast Guard, of which only the Healy (commissioned in 2000) is relatively new. The other two icebreakers,

while heavier than the Healy and thus capable of breaking through thicker ice, are at the end of their designed service life after operating for about 30 years. Yet even if the U.S. begins now, it will be eight to 10 years before a new icebreaker can enter service, and no money has been allocated to build a new-generation heavy icebreaker.[31]

Russian Claims

After its invasion of Georgia, Russia has clearly hardened its international posture and is increasingly relying on power, not international law, to settle its claims. Moscow has also intensified its anti-American policies and rhetoric and is likely to challenge U.S. interests whenever and wherever it can, including in the High North.

Russia takes its role as an Arctic power seriously. In 2001, Russia submitted to the U.N. Convention on the Law of the Sea a formal claim for an area of 1.2 million square kilometers (460,000 square miles) that runs from the undersea Lomonosov Ridge and Mendeleev Ridge to the North Pole. This is roughly the combined area of Germany, France, and Italy.[32] The U.N. commission did not accept the claim and requested "additional data and information."[33] Russia responded by sending a scientific mission of a nuclear-powered icebreaker and two mini-submarines to the area. During this meticulously organized media event, the mission planted the Russian flag on the ocean's floor at the Lomonosov Ridge after collecting soil samples that supposedly prove that the ridge is part of the Eurasian landmass. During the mission, Deputy Chairman of the Russian Duma Artur Chilingarov, the veteran Soviet explorer heading the scientific expedition, declared, "The Arctic is ours and we should demonstrate our presence."[34] Such statements run counter to the spirit and potential of international cooperation and seem inappropriate for a scientific mission.

The U.S. has objected to these claims and stated that they have "major flaws." Professor Timo Koivurova of the University of Lapland in Finland stated that "oceanic ridges cannot be claimed as part of the state's continental shelf."[35] Russia intends to resubmit its claim by 2009.[36]

Russia is also moving rapidly to establish a physical sea, ground, and air presence in the Arctic. In August 2008, Russian President Dmitry Medvedev signed a law that allows "the government to allocate strategic oil and gas deposits on the continental shelf without auctions." The law restricts participation to companies with five years' experience in a region's continental shelf and in which the government holds at least a 50 percent share, effectively allowing only state-controlled Gazprom and Rosneft to participate.[37]

President Medvedev also featured the Arctic prominently in the new Russian Foreign Policy Concept, which states: "In accordance with the international law, Russia intends to establish the boundaries of its continental shelf, thus expanding opportunities for exploration and exploitation of its mineral resources."[38]

During 2008, Russian icebreakers have constantly patrolled in the Arctic. Russia has 18 operational icebreakers, the largest flotilla of icebreakers in the world.[39] Seven are nuclear, including the 50 Years of Victory, the largest icebreaker in the world.[40]

Russia is planning to build new nuclear-powered icebreakers starting in 2015. Experts estimate that Russia will need to build six to 10 nuclear icebreakers over the next 20 years to maintain and expand its current level of operations.[41] Russia's presence in the Arctic will allow the Kremlin to take de facto possession of the underwater territories currently in dispute.

In addition to icebreakers, Russia is constructing an Arctic oil rig in the northern shipbuilding center of Severodvinsk, which will be completed by 2010. The rig will be the first of its kind, capable of operating in temperatures as low as minus 50 degrees Celsius (minus 58 degrees Fahrenheit) and withstand the impact of ice packs. The new rig was commissioned by the state-controlled Gazprom and demonstrates that Russia is serious about oil exploration in the Arctic.[42]

Russia's Polar Saber Rattling

In August 2007, shortly after sending the scientific expedition to the Arctic ridge, then Russian President Vladimir Putin ordered the resumption of regular air patrols over the Arctic Ocean. Strategic bombers including the turboprop Tu-95 (Bear), supersonic Tu-160 (Blackjack), and Tu-22M3 (Backfire) and the long-range anti-submarine warfare patrol aircraft Tu-142 have flown patrols since then.[43] According to the Russian Air Force, the Tu-95 bombers refueled in-flight to extend their operational patrol area.[44] Patrolling Russian bombers penetrated the 12-mile air defense identification zone surrounding Alaska 18 times during 2007.[45] Since August 2007, the Russian Air Force has flown more than 90 missions over the Arctic, Atlantic, and Pacific Oceans.[46]

The Russian Navy is also expanding its presence in the Arctic for the first time since the end of the Cold War.[47] Lieutenant General Vladimir Shamanov, head of the Defense Ministry's combat training department, said that the Russian Navy is increasing the operational radius of the Northern Fleet's submarines and that Russia's military strategy might be reoriented to meet threats to the country's interests in the Arctic, particularly with regard to its continental shelf. Shamanov said that "we have a number of highly-professional military units in the Leningrad, Siberian and Far Eastern military districts, which are specifically trained for combat in Arctic regions."[48]

On July 14, 2008, the Russian Navy announced that its fleet has "resumed a warship presence in the Arctic." These Arctic naval patrols include the area of the Spitsbergen archipelago that belongs to Norway, a NATO member. Russia refuses to recognize Norway's right to a 200-nautical-mile exclusive economic zone around Spitsbergen. Russia deployed an anti-submarine warfare destroyer followed by a guided-missile cruiser armed with 16 long-range anti-ship cruise missiles designed to destroy aircraft carriers.[49]

The resumption of Cold War–style patrols and increased naval presence in the Arctic is in keeping with Moscow's more forward posture and is intended to increase its leverage vis-à-vis territorial claims. Moscow is taking a dual approach of projecting military power while invoking international law. Regarding the naval deployments near Spitsbergen, the Russian Navy stated:

Sorties of warships of the Northern Fleet will be made periodically with a necessary regularity. All actions of the Russian warships are fulfilled strictly in accordance with the international maritime law, including the UN Convention on the Law of the Sea.[50]

At a meeting of the Russian government's Maritime Board in April 2008, Russian Foreign Minister Sergei Lavrov backed a policy of settling territorial disputes in the region with the countries bordering the Arctic through cooperation. First Deputy Prime Minister Sergei

Ivanov, who is now deputy prime minister, stressed at the meeting that Russia observes the international law on the matter through adherence to "two international conventions": the 1958 Convention on the Continental Shelf, signed by Canada, Denmark, Norway, Russia, and the U.S., and the 1982 U.N. Convention on the Law of the Sea.[51]

While paying lip service to international law, Russia's ambitious actions hearken back to 19th-century statecraft rather than the 21st-century law-based policy and appear to indicate that the Kremlin believes that credible displays of power will settle the conflicting territorial claims. By comparison, the West's posture toward the Arctic has been irresolute and inadequate.

Arctic Sea-Lanes

The Arctic Ocean has two main sea routes that are open to shipping for about five months of the year with the help of icebreakers: the Northern Sea Route and the Northwest Passage. (See Map 1.)

The Northern Sea Route links the Barents Sea in the west with the Chukchi Sea to the east and services isolated settlements along Russia's long Arctic coastline. If the Arctic ice cap continues to shrink, it will become a major route for international shipping.[52] A Northern Sea Route that is navigable longer would make the transportation of commodities to international markets easier and significantly reduce transportation costs between the Pacific Rim and Northern Europe (and Eurasia).

A Russian Information Agency Novosti political commentator argued:

The country that dominates this sea lane will dictate its terms to the developers of the shelf deposits and will see the biggest gains from the transportation of raw materials to the Pacific and the Atlantic. These include billions of tons of oil and trillions of cubic meters of gas, not to mention other minerals in which the local lands abound.[53]

Another Russian expert similarly lamented, "If we do not start immediately reviving the Arctic transportation system, voyages on the Northern Sea Route will be led by the Japanese or the Americans."[54]

The Northwest Passage runs through Canada's Arctic archipelago. If the polar ice cap continues to recede, the Northwest Passage will become a major shipping lane for international trade between Europe and Asia, cutting transit times substantially. Currently, navigation is possible along the Northwest Passage during a seven-week period with the use of icebreakers.[55]

According to a report by the U.S. Office of Naval Research, by 2050 "[t]he Northwest Passage through the Canadian Archipelago and along the coast of Alaska will be ice-free and navigable every summer by non-icebreaking ships."[56]

Use of the Northwest Passage is a contentious issue between the United States and Canada. The U.S. argues that "it is a strait for international navigation" because it regards the Northwest Passage as international waters. Canada, on the other hand, claims that the straits of the sea route are "inland seas" falling under Canadian sovereignty.[57]

Resolving this dispute amicably is essential for both countries to benefit from further economic and security cooperation.

International Cooperation

The United States has a strong interest in cooperating with its Arctic neighbors, especially Canada, in developing offshore oil and gas fields and policing the region. Canada is a close NATO ally and a reliable oil and natural gas supplier to the United States. Canada also maintains a very friendly investment climate compared to other energy-producing nations. Opening the Arctic is a major opportunity for U.S. and Canadian companies to enhance the energy security of North America.

At a recent conference, Robert McLeod, former minister of energy of Canada's Northwest Territories, said that exploitation of the oil and gas resources in the Arctic would improve North American energy security and that "[t]he combined northern gas reserves in Canada and the United States could supply southern markets in Canada and the United States with 8 billion cubic feet per day."[58]

Opportunities also exit for cooperation in defense and national security. As during the Cold War, the U.S. could work with its NATO partners in the Arctic region. This is already taking place at the U.S. Air Force base in Thule, Greenland, under bilateral agreements between the U.S. and Denmark that facilitate this cooperation. The U.S. and Canadian Coast Guards resupply the Thule Air Base.[59] The most important example of U.S.–Canadian defense cooperation is the North American Aerospace Defense Command (NORAD). The Alaskan NORAD Region is regaining its former relevance with the Russian bomber incursions.[60]

Warmer ocean temperatures and a smaller ice cap would also provide increased opportunities for U.S.–Canadian maritime cooperation in combating potential terrorist operations and unlawful navigation. Moreover, warming of the northern portion of the Bering Sea may induce the migration of fish to the Arctic Ocean, opening opportunities for joint fishing regulation.[61] With the North Pacific already suffering from extensive poaching, unlawful fishing could become a problem. Joint law enforcement coordination for commercial fishing will be increasingly important.

Reestablishing the U.S. Arctic Presence

The U.S. needs to revitalize its Arctic policy, beginning by elevating U.S. Arctic policy from its third-tier status. Specifically, the United States should:

Create an interagency task force on the Arctic bringing together the Departments of Defense, State, Interior, and Energy to develop the overall U.S. policy toward the region. The U.S. should use diplomatic, military, and economic means to maintain its sovereignty in the Arctic. The U.S. should also establish a Joint Task Force–Arctic Region Command, headed by a Coast Guard flag officer. This joint task force would maintain U.S. sovereignty and have an interagency staff with representatives from relevant U.S. agencies and departments. The U.S. should also establish an Arctic Coast Guard Forum modeled after the highly successful Northern Pacific Coast Guard Forum.

Accelerate the acquisition of icebreakers to support the timely mapping of the Arctic Outer Continental Shelf and the Arctic in general to advance U.S. national interests. The U.S. needs to swiftly map U.S. claims on the OCS and areas adjacent to Alaska to

preserve its sovereign territorial rights. Timely mapping will be important as the other Arctic nations submit their claims within the 10-year window. The U.S. should not rely on mapping from other countries to advance its claims or to defend against the claims of other countries.

Provide the U.S. Coast Guard with a sufficient operations and maintenance budget to support an increased, regular, and influential presence in the Arctic.

Reach out to Canada, Norway, Denmark, and—wherever possible—Russia. Diplomacy and cooperation with Canada and European allies with interests in the region will be required to prevent conflict with Russia and to maintain the special relationship with Canada. The U.S. needs to work with Canada to develop a mutually beneficial framework for the commercial exploitation of Arctic hydrocarbons.

Create a public–private Arctic task force to provide a formal avenue for the private sector to advise the U.S. government on Arctic economic development. This task force should include representatives from energy, natural resources, and shipping sectors among others.

Authorize oil exploration and production in ANWR and other promising Arctic areas in order to expand domestic energy supply. Congress should also streamline regulations for areas that it has already opened but heavily regulated.

Conclusion

As an Arctic nation, the United States has significant geopolitical and geo-economic interests in the High North. The U.S. should not only have a place at the table, but also seek a leadership role in navigating the nascent challenges and opportunities, such as disputes over the Outer Continental Shelf, the navigation of Arctic sea-lanes, and commercial development of natural resources and fisheries.

To play this role and to vindicate its interests, the U.S. needs to continue swiftly mapping the Arctic, build a modern U.S. icebreaker fleet, and work with its Arctic partners in bilateral and multilateral venues. The U.S. needs to revitalize its Arctic policy and commit the necessary resources to sustain America's leadership role in the High North.

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The entire article, including citations, can be found at heritage.org/Research/EnergyandEnvironment/bg2202.cfm

Changes To Plan Suggested

Industry Analysts Predict Navy Will Not Reach 313-Ship Fleet By 2019

By Zachary M. Peterson, Inside the Navy, October 27, 2008

Unless the Navy alters its current 30-year shipbuilding plan, the service will not reach its goal of a 313-ship fleet by 2019, according to a study conducted by industry analysts.

Rising costs and schedule delays have already presented challenges to the Navy's shipbuilding plan in recent years, especially within the surface combatant fleet. The seven-member team of analysts concluded that the service will not reach its 313 ship goal if the current fiscal year 2009 shipbuilding plan is executed as planned, according to briefing slides presented Oct. 22 by Scott Gray, a member of the team.

The analysts argue that the Navy must attain full congressional support for its plan, reign in cost growth, stop requirements creep and conduct successful service-life extensions of existing ships out to 40 years in order to attain a 313-ship fleet by 2019. Under the plan, the service would need to build 11 ships per year in the next decade and deactivate no more than seven ships annually. In light of tight budgets, cost growth and delays in first-of-class programs such as the Littoral Combat Ship and the DDG-1000 destroyer, this feat is unlikely to occur, according to the analysts.

Instead of moving forward with current plans, the service should look to change its way ahead. The analysts suggest the Navy makes seven changes to the plan:

• Stop the new destroyer (DDG-1000) program at two hulls; • restart the DDG-51 destroyer program and build between eight and 12 hulls; • truncate the Littoral Combat Ship buy rate at a maximum of four hulls per year; • build the new cruiser, CG(X), in fiscal year 2015 with lower capability and a non-nuclear propulsion system; • build two more LPD-17 amphibious dock ships; • modernize and extend the service lives of the existing fleet of destroyers and cruisers; • build the Maritime Prepositioning Force (Future) ships beginning with the final two T-AKE cargo ships; and • build the command-and-control ship, LCC-R, using a T-AKE hull to save costs.

Several of the analysts suggestions, such as buying the T-AKE hulls and building more DDG-51s instead of the originally-planned DDG-1000 hulls, are outlined in the Navy's program objective memorandum 2010 (POM-10) budget plans, which detail procurement from FY-10 to FY-15. The plans are subject to change.

The fate of the CG(X) remains undetermined due to a closely-held and long-delayed analysis of alternatives that is intended to determine the requirements for the new cruiser. The study was supposed to be completed late last year.

A provision in the FY-08 National Defense Authorization Act requires the Navy to use nuclear propulsion in all its new large surface combatants unless the defense secretary deems it runs contrary to national security interests. The analysts did not address this issue in the brief presented by Gray.

The Navy's POM-10 submission to the Office of the Secretary of Defense acknowledges CG(X) procurement, which was slated for FY-11, is delayed until at least 2017 due to "technology maturity," while research and development investment continues. Nonetheless, plans outlined in the POM-10 shipbuilding chart reveal the Navy could reach a 313-ship fleet by FY-17 by building more LCS hulls and additional DDG-51 destroyers.

The first part of the CG(X) study, which examined radar-sensitivity analysis, the number of missiles the ship needs to carry and what various hull forms would work for these requirements, was submitted to the Office of the Secretary of Defense last month, Vice Adm. Barry McCullough told Inside the Navy in a Sept. 24 interview. The second part, which addresses the propulsion system, remains under review by Navy Secretary Donald Winter and Chief of Naval Operations Adm. Gary Roughead, he added.

"The secretary and the CNO continue to review the studies and I would hope in the next couple of months we would come to the resolution on which alternative of the many included in the study the Navy will choose," McCullough explained.

Despite the challenges to shipbuilding in the next decade, the analysts predict that the industrial base will achieve greater growth with anticipated support from Congress. The increased volume should lead to increased volume with greater cost controls and reductions, according to slides presented by Gray.

Gates Calls Nuke Capability Critical to Deterrence, Reassuring Allies

By Donna Miles, U.S. Department of Defense Press Release, October 28, 2008

WASHINGTON, Oct. 28, 2008 – Calling nuclear weapons one of the world's "messy realities," Defense Secretary Robert M. Gates said today that as long as others who could potentially threaten the United States possess or seek them, it's critical that the United States does as well, and that they be kept safe, secure and reliable.

"As long as others have nuclear weapons, we must maintain some level of these weapons ourselves," Gates noted in a speech to the Carnegie Endowment for International Peace. This, he said, "will deter potential adversaries while reassuring over two dozen allies and partners who rely on the U.S. strategic umbrella for their own security."

The United States soon will have 75 percent fewer nuclear weapons than at the end of the Cold War, he said. But while endorsing more non-nuclear deterrence and response options, Gates said modern-day threats require the country to preserve what former President Clinton called a "lead and hedge strategy."

"We'll lead the way in reducing our arsenal, but we must always hedge against the dangerous and unpredictable world," he said.

"The power of nuclear weapons and their strategic impact is a genie that cannot be put back in the bottle, at least for a very long time," he said. "While we have a long-term goal of abolishing nuclear weapons once and for all, given the world in which we live, we have to be realistic about that proposition."

The secretary cited threats posed by rising and resurgent powers, rouge nations pursuing nuclear weapons, proliferation and international terrorism.

"There is no way to ignore efforts by rogue states such as North Korea and Iran to develop and deploy nuclear weapons, or Russian and Chinese strategic modernization programs," he said. "As long as other nations have or seek nuclear weapons – and can potentially threaten us, our allies and friends – then we must have a deterrent capacity that makes it clear that challenging the United States in the nuclear arena, or with weapons of mass destruction, could result in an overwhelming, catastrophic response."

The United States continues to keep the number of nuclear states as limited as possible, Gates said, citing "real successes" during the past 45 years through nonproliferation and arms-control efforts. He noted that many countries have opted not to seek nuclear weapons, recognizing that the U.S. nuclear capability protects them.

"Our nuclear umbrella – our extended deterrent – underpins our alliances in Europe and the Pacific and enables our friends, especially those worried about Tehran and Pyongyang, to continue to rely on our nuclear deterrent rather than to develop their own," he said.

But possessing nuclear weapons means accepting the responsibilities involved, Gates said, citing problems that arose last year over the Air Force's handling of nuclear weapons and related material.

He cited remedies being put into place:

— A new office within the Air Staff will focus exclusively on nuclear policy and oversight and report directly to the Air Force chief of staff.

— The Air Force's proposed Global Strike Command would bring all nuclear weapons and material supporting U.S. Strategic Command under one entity.

— The Nuclear Weapons Center at Kirtland Air Force Base, N.M., has been revitalized and expanded, with clearly understood chains of command to prevent repeats of pass problems.

— The Air Force is undergoing a full review to provide better control of nuclear-related components, and placing them under the Nuclear Weapons Center's control.

— A new, centralized process within the Air Force will ensure proper handling of nuclear material and provide expanded training for those charged with securing it.

Gates conceded the effort will be "a long-term process," but said he is confident the Air Force "is now moving in the right direction." He expressed thanks to the airmen working to return the Air Force's nuclear mission "to the standards of excellence for which it was known throughout the Cold War."

Meanwhile, Gates said, he looks forward to recommendations from a task force he formed to review nuclear enterprise oversight.

Gates confirmed that U.S. nuclear weapons are safe, secure and reliable, but said failure to look ahead to the future leaves a "bleak" long-term prognosis. No one has designed a new nuclear weapon in the United States since the 1980s, and veteran nuclear weapons designers and technicians are steadily moving into retirement, with no one following behind.

"The United States is the only declared nuclear power that is neither modernizing its nuclear arsenal nor has the capability to produce a new nuclear warhead," Gates said. He also expressed concern that the country is not replacing its existing stockpile.

Congress's refusal to fund a joint Defense Department and Energy Department program to field a safer, more secure warhead leaves the United States lacking, he said.

"The program we propose is not about new capabilities," he said. "It is about safety, security and reliability. It is about the future credibility of our nuclear deterrent, and it deserves urgent attention."

Experts Consider Decline Of U.S. Atomic Arsenal

Defense Sec. Gates Expected To Call For Renewed Commitment To Deterrence

The Associated Press, October 26, 2008

WASHINGTON - The mighty U.S. arsenal of nuclear weapons, midwived by World War II and nurtured by the Cold War, is declining in power and purpose while the military's competence in handling the world's most dangerous arms has eroded. At the same time, international efforts to contain the spread of such weapons look ineffective.

Defense Secretary Robert Gates, for one, wants the next president to think about what nuclear middle-age and decline means for national security.

Gates joins a growing debate about the reliability and future credibility of the American arsenal with his first extensive speech on nuclear arms Tuesday. The debate is attracting increasing attention inside the Pentagon even as the military is preoccupied with fighting insurgencies in Iraq and Afghanistan. The unconventional tools of war there include covert commandos, but not nuclear weapons.

Gates is expected to call for increased commitment to preserving the deterrent value of atomic weapons. Their chief function has evolved from first stopping the Nazis and Japanese, then the Soviets. Now the vast U.S. stockpile serves mainly to make any other nation think twice about developing or using even a crude nuclear device of its own.

The chairman of the Joint Chiefs of Staff, Adm. Mike Mullen, wrote in the current issue of an internal publication, Joint Force Quarterly, that the United States is overdue to retool its nuclear strategy. He referred to nuclear deterrence - the idea that the credible threat of U.S. nuclear retaliation is enough by itself to stop a potential enemy from striking first with a weapon of mass destruction.

"Many, if not most, of the individuals who worked deterrence in the 1970s and 1980s - the real experts at this discipline - are not doing it anymore," Mullen wrote. "And we have not even tried to find their replacements."

Gen. Kevin Chilton, commander of U.S. Strategic Command, which is responsible for maintaining the nation's nuclear war plans, told Congress last spring that technical nuclear expertise also is lagging.

The Navy's Premiere Counterterrorism Tool

Posted by "Galrahn," informationdissemination.blogspot.com, October 27, 2008

Rear Adm. (sel.) Mark Kenny, director of the new Navy Irregular Warfare Office, told the Submarine Naval League Symposium in Virginia last week that the SSGNs are being sent "where al Qaeda is at...it's that simple" according to an article in Defense Daily (subscription) this morning.

"The first two deployments, the Ohio and Florida, were groundbreaking deployments," he said at the Naval Submarine League Symposium in McLean, Va. "The ships work as advertised, brought home the bacon. And I wish I could give you the briefs in detail, because they are eye-watering..."

"These ships are the Navy's premiere counterterrorism tool, no doubt about it," Kenny said. He added that's the view of "those that lead this fight"—officers such as Special Operations Command leader Adm. Eric Olson—as well as the intelligence community.

We recently observed the USS Ohio (SSGN 726) with two dry deck shelters, which one would imply that there were at least two special operations teams aboard. The article goes on to the discuss unmanned systems in development for the SSGN, including submarine versions of the Sea Stalker and the Boeing ScanEagle, to improve ISR capabilities.

The SSGN has an advantage over aircraft because it has both the intelligence-surveillance-reconnaissance (ISR) and strike capabilities, he said, and doesn't need permission from other nations to take off and land.

If you have read here long, you should already be aware that it is the submarine force quietly leading from the front lines for the Navy. Good to see the submariners get some credit. However, ADM Kenny should have stopped while he was ahead.

He added that the SSGN can fill the gap in surface-fire support created by the planned truncation of the DDG-1000 destroyer line. Sigh. ADM, stick to irregular warfare, that last comment drove a Marine sitting 20 feet from my desk to use his outside voice indoors, and when you remove the colorful adjectives of his comment it goes something like "that guy knows nothing about fire support." Maybe you were making an important point, but the Tomahawk Cruise Missile is not fire support, and if that is what you are talking about I will agree with the Marines.

What's In Your Trash?

Posted by "Galrahn," informationdissemination.blogspot.com, October 27, 2008

This sounds clever. Described as a flying periscope, the article does not cite the cost of this one shot toy.
America has gone one better than Germany in the race to develop the world's most powerful submarine-launched robot aircraft. US arms giant Raytheon has announced a model which can be deployed at depth without modification to the submarine.

The new U-UAV is dubbed SOTHOC, for Submarine Over the Horizon Organic Capabilities. The launch system works by deploying a sealed can through the sub's waste disposal lock. The can then sinks away safely to get clear of the boat. On reaching a preset depth it dumps weight to become positively buoyant and ascends to the surface. Once stable at the surface, it aligns itself into wind and launches a one-shot, disposable UAV.

It is certainly a clever weapon system, but how do we counter it when the enemy does this to us? Lets assume you can detect this at 10 miles and it is watching your ship under good visibility. Now lets say you are a destroyer, how do you shoot it down at that range? Electronic attack?

These small UAV systems don't have to be submarine launched, the real danger comes when everyone is actively using these small UAVs to recon naval forces. Depending upon cost and capability, the counter could be something as simple as a smoke machine, or something as complicated as a remote control bullet.
A EW option could be best, if we can use it without revealing a precise position to a larger degree than a UAV operating at 10 miles already is.

Nuclear Attack Submarine - On the Cheap

Posted by "Galrahn," informationdissemination.blogspot.com, October 27, 2008

Isn't this kind of like asking to borrow a cigarette, you'll give it back when your done? This is one of those stories where the hard truth is elusive. All we really know is that there is a new modern nuclear attack submarine, and a lot of people think it will soon be operated by Indian sailors.

"The submarine, built under a contract with the Russian Defense Ministry, has been moved from the shipyard in Komsomolsk-on-Amur to a maintenance facility in the Primorye Territory and fitted with all necessary equipment. At present it is undergoing sea trials," a spokesman for the shipyard told RIA Novosti.

Indian media have reported on various occasions that the construction of the submarine was partially financed by the Indian government. India has reportedly paid $650 million for a 10-year lease of the 12,000-ton submarine.

According to Indian defense sources, Nerpa is expected to join the Indian navy under the designation INS Chakra in the second half of 2009.

Is $65 million lease plus operational costs a good deal for a nuclear attack submarine? Yep, it is cheaper annually than buying and supporting the operational costs of a US Navy Virginia class submarine, so it is hard to blame the Indians for wanting the deal? It also can't be a bad thing for Russia, insuring the shipyard remembers how to build nuclear attack submarines is important as Russia looks to the future. Looks like a winning deal for both sides.
Now if we could just get some hard data regarding the comparisons of a Type 093 and the Akula II. I don't know about you, but I'd be interested to know if India just passed China in terms of underwater nuclear submarine capabilities with one swing of the checkbook.

Russia's New Nuclear Attack Submarine Starts Sea Trials

RIA Novosti, October 27, 2008

VLADIVOSTOK, October 27 (RIA Novosti) - The Amur shipyard in Russia's Far East said on Monday it had started sea trials of a newly built nuclear-powered attack submarine, which according to media reports may be leased to India.

The construction of the Akula II class Nerpa nuclear attack submarine started in 1991 but has been suspended for over a decade due to lack of funding. Akula II class vessels are considered the quietest and deadliest of Russian nuclear-powered attack submarines.

"The submarine, built under a contract with the Russian Defense Ministry, has been moved from the shipyard in Komsomolsk-on-Amur to a maintenance facility in the Primorye Territory and fitted with all necessary equipment. At present it is undergoing sea trials," a spokesman for the shipyard told RIA Novosti.

Indian media have reported on various occasions that the construction of the submarine was partially financed by the Indian government. India has reportedly paid $650 million for a 10-year lease of the 12,000-ton submarine.

According to Indian defense sources, Nerpa is expected to join the Indian navy under the designation INS Chakra in the second half of2009.

The submarine will not be equipped with long-range cruise missiles due to international restrictions on missile technology proliferation, but India may later opt to fit it with domestically designed long-range nuclear-capable missiles.

However, a spokesman for the Amur shipyard earlier said that Nerpa differed considerably from the previous Akula-class submarines.

"Our Nerpa is fitted with more sophisticated navigation, sonar, and hydraulic systems," he said.

Russian state officials have categorically denied reports of a possible lease of a nuclear submarine to India.

Asked in late September to comment on media reports on alleged plans to export nuclear submarines, in particular to India, Defense Minister Anatoly Serdyukov said: "The press discusses lots of things. We do not export nuclear submarines."

India previously leased a Charlie I class nuclear submarine from the Soviet Union from 1988 to 1991.
Russia recently handed over to India the INS Sindhuvijay diesel-electric submarine after an extensive overhaul at a shipyard in northern Russia.

Once Upon A Time: Submarine Tragedy Touched Everyone In Region

By Bill Stanley, The Norwich Bulletin, October 26, 2008

Once upon a time, during World War II, submarines from the Atlantic fleet would sail home up the Thames River with a broom tied to their periscope. People would line the shore and also line both the railroad and automobile bridge that connected New London with Groton. When word spread that a submarine was headed back into port, everyone who could gathered to welcome them. It was always a special thrill when a broom was tied to the periscope, as it meant a clean sweep. It was the crew's way of telling everyone ashore that they sank every enemy ship they spotted.

That was then, and now the subs are so big and their mission so different. Yet, submarine warfare and Electric Boat and the sub base are so much a part of this area, I thought I would write a submarine story today.

It was Aug. 26, 1949, in the Arctic waters off the coast of Norway that a fire, followed by several explosions, caused a disaster at sea. The first submarine to sink since World War II was the Cochino. There would be a loss of life, but there also would be a miraculous rescue by a sister ship, the Tusk, which was in the area.

Our bond with subs

We in Eastern Connecticut are privileged to know the brave men of the submarine force. They are a breed apart, endowed with a rare courage that not many have.

So often the world has seen dramatizations of life on a submarine; everything from "Crash Dive" with Clark Gable years ago, to "The Hunt for Red October" with Sean Connery. These movies let us all see the special talents and the unparalleled dedication of our neighbors in SUBLANT, the Submarine Atlantic Fleet.

During the war, when it was announced that a submarine had failed to return to the base and was assumed lost at sea, it was a personal loss for all of us. All area towns felt the pain. There were so many subs that did not return, and there was no way of knowing what their ultimate fate had been. In Groton, in the shadow of the Gold Star Memorial Bridge, is a most fitting memorial to the many men and boats that were lost to that perilous North Atlantic during World War II and after.

As a boy, I remember every holiday my mother and dad, and many other families, always invited sailors, Coast Guardsmen, or Marines from the sub base for Thanksgiving, Christmas and Easter dinner. They were from all over the country, and many of them ended up being pen pals for years. Those war-time years brought many of us closer to the sub service and the elite men who went to sea under such difficult conditions.

During the Korean War, as a Marine, I had the good fortune to serve one year of my duty as commander of the guard at the submarine base. While I was a Marine military policeman, and not in any way welcomed into that special fraternal group that is the submarine force, I did gain an even greater respect for the integrity, the loyalty and the courage of the men who were called submariners (sub'ma' re' ner), never submariners (Sub'mar'ener).

While the Marine corps is part of the Navy, traditionally Marines and sailors have always conducted themselves as cats and dogs, though each of them when the chips are down in combat will defend each other to death. But of all the specialized Navy groups, I doubt that any have the espirt de corps that the submarine men carry so proudly and properly.

Started with small fire

Back to the tragic day off the shores of Norway. According to the boat's commander, Rafael Benitez, the first knowledge he had of any trouble was when a shout of "fire" came from the aft battery room. The submarine was then at periscope depth (about 60 feet) below the water, and the men were forced out of the compartment by the dense smoke, as three explosions followed. Five men were injured in that first explosion. The executive officer was severely burned on the arms, legs and body.

There was, at first, hope of saving the ship. About six hours after the first explosion, electric power was lost, and so the ship lost its steering abilities as well as mechanical operation. The boat by then was on the surface, and 58 of the crew were ordered to the "sail part of the sub." (The sail is the area that encases the conning tower.)

During the afternoon, Commander Benitez decided to lighten the human load on the Cochino so that the more experienced men on the crew might attempt repairs. This was an option open to him now because of the arrival of the Tusk. The Tusk had been operating on a different training mission, and while it had been 300 miles away just several days prior, it was virtually on the scene at the time of the disaster and had just come into sight over the horizon.

No one knew the conditions they were about to face. It was a rough North Atlantic, and that disabled the boat, which rode like a cork in that rough sea. It was no easy job getting the men in rubber rafts, but it was done. No sooner had the rubber rafts been launched than the Cochino capsized in the high seas. The last rubber raft to leave made a valiant and successful effort to return to rescue the remaining crew.

There had been a civilian aboard, not completely aware of Navy rescue procedures, and as the men tried to protect him and deliver him safely from the Cochino to a life raft, a huge wave washed three men into 40-degree waters. Six crew members were killed. Some died almost instantly from the severe temperature of the water. The entire crew would have been lost except for the unlikely event that a sister ship was within a mile from the disaster scene enabling an almost complete rescue.

Relief at homecoming

I took today's picture on a cloudy but happy day, as the Tusk returned to Groton with their precious cargo. All submarine personnel at the base fell out to honor the returning heroes and victims, and men of the ill-fated Cochino stood at attention on the deck of the Tusk as their wives, sweethearts, and family waited anxiously to greet them.

Most of the married members of the crew of both boats lived in Eastern Connecticut, although they came from all over the nation. But, there was at least one young man who went to school with me, Norm Gauthier, who came down the gangplank that day to meet his sweetheart, Dorothy Przygoda.

Recognizing someone from that heroic adventure at sea seemed to bring more meaning to the whole event. In the following weeks, it seemed everyone knew someone aboard one of the vessels and so the stories were told of the bitter cold, and the high winds, and that fateful moment when a giant wave swept 13 men into the freezing North Atlantic.

We in Eastern Connecticut were made to remember once again that we lived with heroes, men willing and apt to give their lives in the line of duty.

Roughead: Sub Force Sets High Standard

By Andrew Sartre, Navy Times, 3 November 2008

The Navy's "skimmers" might want to tear a page from the submarine force playbook, the service's top officer said.

While the surface force has seen its next-generation destroyer scuttled from within and other ship-building costs skyrocket, two new attack submarines joined the fleet this year, ahead of schedule and on budget.

Chief of Naval Operations Adm. Gary Roughead, a career surface warfare officer, jokes that his fellow black shoes believe he's gone to the "dark side," but he's proud of it.

"I love submarines," he told a roomful of submariners Oct. 22 during the annual meeting of the Naval Submarine League. `There's not a force that performs its missions in the professional and competent way that you do."

Throughout the two-day conference, sub captains, program managers and other officials pointed out differences between them and their surface brethren. While inter-community rivalries are common at such events, the confidence level of these submariners was high.

While some surface combatants and gators deploy on missions that many sailors compare to "Groundhog Day," the undersea fleet has been conducting classified counterterrorism operations in the treacherous shallows. And submarine skippers pointed to disciplined crews that boast hundreds of consecutive days without an alcohol-related incident.

Roughead, during his speech, said that when he led the Pacific Fleet, he considered the undersea force his "killer arrow in the quiver," not a Cold War leftover as some perceived.

"As a commander in the Pacific, you rely on submarines more than anything else," he said. "There's nothing that represents the ultimate in stealth like a U.S. Navy nuclear submarine."

That stealth yields the kind of in-formation senior leadership wants ;submarines are used extensively today for intelligence gathering and surveillance. As CNO, Roughead said he has received more briefings from submarine commanders home from patrol than he does from returning — and higher ranking — strike group commanders. "You can't talk about the Navy and irregular warfare and not talk about submarines. They are perhaps the most versatile and clearly the most stealthy capability that we have."

He also noted his confidence in the ballistic-missile submarine fleet, especially in light of the re-cent mishandling of nuclear weapons by the Air Force.

One major point of pride in the submarine community is the delivery this year of two Virginia-class attack boats. With other programs like DDG 1000 — cut down to three ships at the most — and the Littoral Combat Ship program — which has dealt with delays and skyrocketing costs — Roughead wants to see submarine force's way of doing business copied elsewhere.

"It's the first time in a long time we've taken delivery of two sub-marines in one year, with North Carolina and New Hampshire," he said. `.'Those are pretty positive trends, and I would submit that it's not only a trend we want to keep going in the submarine force but that we translate into every other ship class we are pursuing."

Kenny: 'Saber Focus' To Use Subs, Ships, Uavs For Irregular Warfare

New System Will Rely On Bandwidth Improvements

By Dan Taylor, Inside the Navy, October 27, 2008

The Navy will deploy a new system of communicating platforms involving unmanned aerial vehicles, surface ships and cruise-missile submarines to combat irregular warfare threats beginning early next year, according to Rear Adm. Mark Kenny, director of the Navy irregular warfare office.

The Ohio-class SSGN submarine will serve as the centerpiece for Saber Focus, a system that will employ the Reaper drone — a UAV that carries more than seven times the payload of a Predator drone, can spend 20 hours in the sky and is able to send high-definition data — as well as lighter UAVs such as the Buster, Kenny said Oct. 23 during his presentation at the annual Naval Submarine League symposium in McLean, VA.

The system would also bring surface ships and ground teams into the mix, and all involved would share data with each other in order to combat irregular warfare threats, the admiral said.

"Over the network, it's all about the flow of information, and being able to do something about it," he said. "The SSGN will get a factor of probably a hundred times the data. . . . They're going to have a 100-fold view of the world compared to the rest of the world."

Vice Adm. Jay Donnelly, submarine forces commander, has already converted one SSGN to be compatible with such a network, and he will also convert a second SSGN in the Atlantic, Kenny said.

The admiral said networks like this are critical because timely sharing of information is paramount in today's environment of irregular warfare.

"You're in a position now where communicating is your main mission," he said. "Information in a counter-terrorism realm, if it's more than a day old it may be worthless, if it's more than a couple hours old it may not be useful."

But the success of such a system will depend on bandwidth, an issue that has plagued the entire Navy for years.

Kenny touted Navy efforts such as communications at speed and depth. The service announced in March that it had developed a networking system that will allow two-way communication between submarines and other vessels or platforms without forcing the subs to reduce speed or surface. The plan is to start installing the systems this fiscal year.

In order for the Saber Focus system to be effective, it will require bandwidth that will enable sailors to transmit large files, such as pictures or video from UAVs, Kenny said.

"We . . . have to attack bandwidth issues," he said. "You name it, it requires bandwidth."

Irregular Warfare Official: SSGN Subs Are Navy's Premiere Counterterrorism Tool

By Emelie Rutherfordm, Defense Daily, October 25, 2008

The Navy's SSGN cruise-missile submarine has become the Navy's "premiere" irregular-warfare (IW) platform, and may soon launch new unmanned water and air vehicles in the fight, a senior service official said.

Rear Adm. (sel.) Mark Kenny, director of the new Navy Irregular Warfare Office stood up in July, said last week that the deployed SSGNs—the USS Ohio (SSGN-726) and Florida (SSGN-728)—are being sent "where al Qaeda is at...it's that simple."

"The first two deployments, the Ohio and Florida, were groundbreaking deployments," he said at the Naval Submarine League Symposium in McLean, Va. "The ships work as advertised, brought home the bacon. And I wish I could give you the briefs in detail, because they are eye-watering."

He said he is looking forward to the USS Michigan (SSGN-727) and Georgia (SSGN-729) joining the operational cycle.

The Navy converted these four Ohio-class Trident submarines to carry Tomahawk cruise missiles, unmanned craft, and special-forces personnel.

"These ships are the Navy's premiere counterterrorism tool, no doubt about it," Kenny said. He added that's the view of "those that lead this fight"—officers such as Special Operations Command leader Adm. Eric Olson—as well as the intelligence community.

In terms of unmanned systems, Kenny said the Pentagon has funded the Sea Stalker unmanned underwater vehicle (UUV), which he said will expand signals intelligence (SIGINT) capabilities.

"We're working this one with an incredible sense of urgency to get it out into the fight," he said. The Sea Stalker is being outfitted first on the USS Bainbridge (DDG-96), and then on the Georgia SSGN "later next year," he said. It will go on a surface ship first because of issues with certifying batteries, he added.

There's also "a lot of momentum with UAVs (unmanned aerial vehicles) for submarines," he said.

Kenny expressed interest in the Boeing [BA]-built Scan Eagle UAV, a program of record for the surface community.

"We're looking at aggressively trying to adapt it to a submarine," he said, adding Boeing is working with General Dynamics [GD] Electric Boat on the effort, and the Navy is eyeing a demonstration off of an SSGN for next year.

"This gives us payload, sensors, SIGINT, collection, you can arm it, it's got about six times and endurance and range of our small vehicles," he said.

With a SSGN, he said, the Navy is able to set up a near-shore sensor network that overlays the network al Qaeda is using. This sensor network—which also includes UAVs, manned surface ships, and small teams ashore—can cover "probably 99.5 percent of all al Qaeda strongholds," with Chechnya being an exception because it is out of range, he said.

"Key about this is you're bringing in naval platforms, whether it be a submarine—SSGNs, SSN—a DDG (surface combatant), that brings the reach-back to the national intelligence databases, real-time draw overhead imagery, real-time exploitation of national databases, using processing and evaluation and distribution of that information, both within a ship and ashore, forces ashore or surrogates ashore," he said.

The SSGN has an advantage over aircraft because it has both the intelligence-surveillance-reconnaissance (ISR) and strike capabilities, he said, and doesn't need permission from other nations to take off and land. He added that the SSGN can fill the gap in surface-fire support created by the planned truncation of the DDG-1000 destroyer line.

Kenny said he wants industry to get the message that "IW is an enduring mission." Defense Secretary Robert Gates and the two main candidates for president all agree, he said.

"What we're hearing back is that irregular warfare, counterterrorism will continue to be a priority in either candidate's administration," he said.

He added that al Qaeda is not backing down. "So that being said, I think it will drive us to be aggressive with SSGN; investment against this threat will continue and we have the ability to beat the maritime environment," he said.

Hundreds Protest At Nuclear Site

Up To 100 Anti-Nuclear Campaigners Are Gathering At The Atomic Weapons Establishment (AWE) In Berkshire To Blockade The Entrances.

BBC News, October 27, 2008

They are concerned that the facilities at Aldermaston could be used to design and manufacture a new generation of nuclear warheads.

The protest, organised by Trident Ploughshares, also marks the start of World Disarmament Week.

Thames Valley Police advised motorists to avoid the area.

AWE provides the warheads for Trident - the submarine-launched missile system that constitutes the UK's nuclear deterrent.

The Campaign for Nuclear Disarmament (CND), Block the Builders and the Aldermaston Women's Peace Camp groups are also taking part in the Aldermaston Big Blockade.

'Peaceful blockade'

Daniel Viesnik, from Trident Ploughshares, said: "Trident is a serious hazard to life, health and the environment and there can never be a lawful or moral use for it.

"We as concerned citizens have therefore called a peaceful blockade during World Disarmament Week to demand that the new developments are ceased and the whole Trident system taken out of service without delay."

The protesters plan to remain at the site all day.

Officers from Thames Valley Police, the Ministry of Defence (MoD) and Hampshire Constabulary, including mounted officers, said they were at AWE "to facilitate lawful protest, deal with any individuals who break the law, and ensure the safety of the public".

Ch Insp Robbie Robins, from the MoD police, said: "We are hopeful that this protest will pass off peacefully, with no criminal activity and with minimal disruption to AWE and the local community."

Flexibility And Affordability Will Be Major Focus Areas For Next Sub Design, Admiral Says

By Geoff Fein, Defense Daily, October 24, 2008

A major focus of the follow-on to the Trident (SSBN) submarines will need to be affordability, flexibility and underwater payload capacity, as well as taking lessons learned from the current Virginia- class build, according to a top Navy admiral.

"Clearly a major emphasis of the Sea Based Strategic Deterrent (SBSD), the follow-on to SSBN, will be affordability," Vice Adm. Jay Donnelly, commander of the submarine force, told Defense Daily, earlier this week at the annual Naval Submarine League symposium.

"The construction techniques we have developed and continue to hone on the Virginia-class, I think we'll certainly apply those lessons learned to that next submarine class," he added.

Modular construction of the Virginia-class submarine has really worked well, Donnelly said.

"The ability to build those modules outside of the pressure hull and fully populate them, test them every way, and then insert them into a hull section, has saved us a lot of money and we are seeing greatly improved construction rates," he said. "The next design, whatever it turns out to be, we will try to leverage all of those good lessons we have learned from the Virginia class."

With the Navy's focus on building modular ships that can be easily upgraded, and in the case of the Littoral Combat Ship, can be converted to carry out a number of different missions, could the Navy eye taking the SSGN concept and incorporate it onto SBSD? Donnelly said he wasn't sure what lessons directly translate over to the next ballistic missile submarine.

But there is one lesson, he noted, that is very important- flexibility.

"Flexibility and underwater payload capacity are tremendous advantages," Donnelly said. "As we look at the AoA (Analysis of Alternatives) for SBSD and we begin to invest in 2010 in R&D (Research and Development), we will focus on flexibility for that platform...looking at various payload options and payload capacity for that platform, to give it as much flexibility as possible," he said.

Donnelly envisions SBSD having a service life of upward of 50 years. So with commissioning of the first SBSD in 2025, the first platform will likely last until 2075, he noted. "So flexibility and adaptability are going to be key to that platform."

While it's impossible to determine with any certainty what the challenges are going to be to the nation out in the 2075 time frame, Donnelly said the Navy can make some reasonable assumptions. "The one thing that I think is for [certain] is the need for the platform [SBSD] is pretty well established."

"As long as nation states possess nuclear weapons, I think the U.S. will need a strategic deterrent to dissuade potential adversaries from using nuclear weapons against this nation," he said.

By basing those strategic deterrent weapons in a submarine, which has survivability, that gives the nation a much needed capability, Donnelly added. "I think with pretty good certainty, I can say we will need a SBSD."

Trying to determine what technologies will be out there 50 years from now that could threaten SBSD is difficult to say, Donnelly noted.

But that's why it's important to build a submarine with flexibility.

"If you build a platform with some growth potential...with some flexibility, adaptability, we will cope with new technologies as they come along," he said.

With the Navy set to commission the USS New Hampshire (SSN-778) this weekend, and a contract for construction of the Block III Virginia-class boats expected by the end of the year, the Navy has been very, very happy with the progress of the program, Donnelly said.

"I think the beauty of that ship [is that] it was designed with a lot of capability. We have a fiber optic backbone that can carry a tremendous amount of information throughout the ship," he said. "We have that massive lock-in, lock-out chamber...we carry the ASDS (Advanced Seal Delivery System) and the dry deck shelter."

Changes to the torpedo room also demonstrate the advantages of flexibility in the Virginia-class ships, Donnelly noted.

"The reconfigurable torpedo room is a great example. You are no longer encumbered by the torpedo support facilities that we had on earlier classes," he said. "You have this large space in the torpedo room that you can use for a whole host of potential payloads that can go in and out of the torpedo tubes. Likewise on three of the Virginias, these large diameter tubes give you a lot of new payload capacity. It is very similar to what we can field on SSGN."

Each SSGN has one tube that can carry experimental payloads, Donnelly said.

"I think the potential of large diameter UUVs (unmanned underwater vehicles) is tremendous. We could put those in the large diameter tube on the SSGN," he said.

Those UUVs can go more than 1,000 miles out and for long periods of time, and are capable of conducting minefield reconnaissance or intelligence, surveillance and reconnaissance (ISR) operations, Donnelly said.

And UUVs could be used for harbor ISR too, he added. "You can let you imagination run with the payload that could go into very shallow water or areas a submarine just can't go into," Donnelly said.

And if the Navy develops UUVs for SSGN, those systems would be adaptable to the same vertical launch tube found on the Virginia class.

"I think there is a future potential, especially with the reconfigurable torpedo room with those large diameter tubes," Donnelly said. "We could put new sensors on the ship that could give you a much greater awareness of the maritime domain."

One effort planned for the USS Florida (SSGN-728), one of four Ohio-class conversions from ballistic missile submarines to guided missile boats, is unmanned aerial vehicle operations from a submarine, Donnelly noted.

"We are modifying our [systems] so we can interface with Buster, a bungee cord-launched system that can reach an altitude of 1,000 feet.

Buster will be equipped with an infrared (IR) camera and has a range of at least 20 miles, Donnelly told attendees at last year's Naval Surface League conference (Defense Daily, Nov. 1).

Both the Florida and the USS Alexandria (SSN-757) have deployed Buster, Donnelly said on Wednesday.

"We don't really need to launch it from a submarine as long as it's in the air in an area where the submarine may be operating," he said. "If we can receive the down link...if we could re-task it to take a look at another area...and if we could use it in support of forces on the ground, and irregular warfare, and then when we are done with it we turn over control and another [station] can take it."

That concept of network centric operations, of controlling a UAV from a submarine, is the future the submarine force is looking at, Donnelly said.

"There's no reason we couldn't do that," he said. "We have actually proven that."

Donnelly pointed to the SSGNs. “We put a lot of communications capability on that ship. Now you’ll have to be at periscope depth with the current technology, and the mast has to be exposed, but that’s better than having to surface the ship and having to launch something with a bungee cord,” he added.

Another area of focus for Donnelly is giving the submarine force to communicate at speed and depth.

“When I talk about communications at speed and depth , I would like to be to allow the submarine to operate at best depth necessary for its mission and still be able to share information,” he said.

Having the capability to communicate at speed and depth would enable, for example, a Joint Task Force commander to tell a submarine [that is at depth] to stop what they are doing and re-task, because there is an aMQ-9 Reaper bound for their position that the submarine will need to take control of in support of ground operations that are currently in progress, Donnelly said.

“We could do that without having to wait for a very low frequency submarine broadcast, which is on a 12-hour schedule,” he said.

Another more realistic scenario, Donnelly said, would be the ability of a Carrier Strike Group to notify a submarine at depth that an adversary has been detected and the submarine will need to reposition itself.

“They could immediately notify the submarine, and from depth [they could] acknowledge without having to come to the surface, stick up the mast, communicate and then go deep and reposition,” Donnelly said. “It could really give the submarine a lot more agility without being forced to slow down to periscope depth.”