

# Steel Valley Dolphins

July 2018



The official newsletter of the  
USS Requin Base of the USSVI  
Pittsburgh, Pennsylvania

## USSVI Creed:

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



Meetings held on the second Saturday of the month normally in BADen at the American Legion Post and quarterly meetings held around our membership area.

- **Make a difference, get to a meeting!**

----- Pride Runs Deep -----

Next Meeting: 1230 11 August 2018 at the American Legion in Baden Pa.

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----- Pride Runs Deep -----



## Binnacle List

Aaron Ellis  
Carl Stigers Mother  
Sally Smith  
Sharon P:orter



## COMMANDERS COLUMN:

Our trip to Groton was very successful! Attended by shipmates, Campisi, Elster, Hamill, Underkoffler, Loskoch, Gains, Stigers and myself. Underkoffler's brother Floyd and companion, joined us for the activities coming from Titusville, FL., and Chuck Loskoch's and first mate Nancy also traveled to be with us.

While we were visiting the Groton base club house, shipmate Rick Beauregard joined us for some torpedo juice. Rick is a very active member from Johnstown, Pa. He lives in Groton and is employed by the shipyard.

We were both honored and privileged to spend quality time with Dr. Carol Sawyer. She is the sponsor of the PITTSBURGH. It was thirty-three (33) years ago that she broke the bottle of champagne across the bow. She heard that we were going to Groton and she wanted to share this special occasion.

Upon arriving in Groton, we went directly to the Nautilus museum. WHY you ask? Well sissy shipmate Lou Hamill was last in Groton in 1986. He was like a baby in a candy store! He really enjoyed seeing the old gal.

After we checked into the navy lodge, we went to three (3) watering holes – Groton base club house, the fleet reserve and the Elks. What a wonderful visit. Shipmates Stigers and Underkoffler went on board the PITTSBURGH. They traveled to Groton the day before we did. While on the dock, they delivered our gift of twenty (20) cases of our home town's finest.

The next morning shipmate Chuck and Nancy Loskoch joined us at the base, to visit PITTSBURGH for our tour. Commander Jason was in Norfolk to receive his sailing orders from the Admiral. It was so good to see the PITTSBURGH and its crew – what a great bunch of sailors. Before we went down to the lower base, we visited the navy exchange. Everyone picked up what they wanted. I purchased six (6) watch caps for our small stores. In the fall, contact Frank Nicotra.

After the visit to the PITTSBURGH, we went up to North Lake, which is on the base, where the Captain and COB invited us to their PITTSBURGH'S picnic. WOW – it was wonderful to spend quality time with the entire crew. During the day, we had the opportunity to present the one hundred and fifty (150) Steeler Terrible Towels to Captain Jason. The Captain and crew were so thankful to the REQUIN



base for our generosity of both the towels and beer. In fact, the captain wanted to take a picture with me, enjoying a cold one.

Every Requin base sailor in attendance enjoyed the camaraderie with each other and it was great to visit Shipmate Lawton Gains from Massachusetts and Richard Beaugard from Groton. Shipmate Underkoffer stayed the entire week visiting with his brother Floyd. His brother loved the visit and the shipmates from the Requin Base and so he joined the Requin Base. Shipmate Loshkosh and his first mate stayed a few more days to visit the area. Shipmate Carl Stigers left a day earlier to be home for his mother's operation – which was successful.

I personally want to thank the entire Requin base crew that made the trip to Groton! I am so proud to be the Commander of the REQUIN base.

Here are a few e-mails that the Requin shipmates sent to Commander Deichler.

From Carl Stigers:

On behalf of the Requin Base Crew members who come up to visit, I would like to extend our deep appreciation for the kindness and the amount of time the various crew members took to give us tours, escort myself and Chad Underoffler onto lower base. And the willingness of the various crew members we came into contact with to be so gracious and understanding to a couple of "old timers". The A-Gang challenge coin will be a cherished memento of the trip as far as mine goes. The NAV LCPO (Chief Cuscuido) was an example of professionalism as good as I have ever encountered. The MS Chief also was gracious.

Two observations I would like to make. 1.) The fact you are preparing to get underway on a major deployment and made time for us is a testament to the quality of people in today's Navy. No matter what we asked every effort was made to explain things to us and show us pretty much everything we were permitted to see. Everyone we came in contact with shook our hands, most thanked us for our service and made us feel as if we had never left the boats. That is no small feat in my humble opinion. Chief C., showed us that the knowledge level on the boats has not diminished one iota and Chief would have been considered a heavy duty during my time on the boats. Any question I asked of the many crew members we came into contact with was answered promptly and professionally.

My second observation is that United States Navy Submarine Force is in tremendous hands and is a testament to the quality of people this country takes the time to recruit and train. I can easily see you and the crew “fighting” the ship and going in Harm’s way. I see the same spirit that we had when we were your ages and we were riding the boats. Makes one proud to know that the defense of our nation is in such capable hands.

Please convey to the crew my and our gratitude and sense of awe with what you all do today. May you have fair winds and following seas in your patrol and come back with a broom on the scope so to speak.

From Lou Hamill:

The trip to the USS Pittsburgh was an event that I will always remember and cherish. Some of you know that I attended the commissioning of the USS Pittsburgh and to be able to go back again after all these years is very special to me.

I want to personally thank Captain Deichler and Master Chief Lewis for the hospitality extended to us by them and the crew. The officers and crew reflect the kind and caring personality of the people from Pittsburgh Pennsylvania. Bravo Zulu USS Pittsburgh.

From Chad Underkoffler;

I can’t add to the much of anything to the “E” Mails that Carsten and Lou have sent to you, other than, in my heart, the USS Pittsburgh SSN 720 has added a new meaning to “PITTSBURGH PROUD”. The respect and honor that all of you showed us is truly appreciated and will not be forgotten.

Also it is the wish of the Requin Base, that is somehow it is arranged that when the sad day arrives that the Pittsburgh SSN goes the way of most naval vessels, the picture what was presented of the 1985 Pittsburgh Steelers be retained by (Captain) Commander Jason Deichler a “True Son of Pittsburgh Pa.”

Again, thank you for letting us be part of the family. May you all have Fair Winds and Following Seas.

(Chad – presented the picture to the Captain at the ship’s picnic).

From Huey:

Words can't express how thankful I and the crew of the Requin Base are for your friendship and hospitality, that you shown us on our visit to the PITTSBURGH. My other shipmates expressed to you their feeling and believe me, they will cherish the entire trip, tour, picnic and visit.

We are here to support you and the PITTSBURGH. Please have a safe and successful deployment. Please, when you get a chance, send me an e-mail so I can share it with the base.

**NEXT BASE MEETING - A.L. BADEN- AUG 11, 12:30 – second floor**

**BIRTHDAYS**

**ANNIVERSARIES**

**Member**

**Spouse**

BRIGHT, Don 8/01/52	MARKEL, Caarmella 8/27	BEADLE, Bill & Madeleine 8/29
Cantwell, Dennis 8/29/47	McGee, Karen 8/10	BROWN, George & Cindy 8/12
Ellis, Aaron 8/21/36	Osborn, Francis 8/24	Cherock, Mike & Laura 8/21
Hayes, Fred 8/16/53	Regits, Marilyn 8/07	Ellis, Aaron & Sandy 8/01
Haupt, Aaron 8/3/78	Sigler, Doattie 8/09	Hollingsworth, Herb&Evelyn 8/30
Indo, Frank 8/03/41	Staas, Sandra 8/16	Haupt, Aaron & Erin 8/30
Keller, Bob 8/03/41	Stewart, Louis 8/07	Keller, Bob & Carol 8/11
Murman, Al 8/16/37	Sutherin, Jr., Susan 8/12	Larson, Merlin & Judy 8/15
Schwarz, James 8/26/51		Lindsay, Bob & Rita 8/18
Stahl, Robert 8/10/23		Lucas, Ron & Pam 8/15
Winters, Mark 8/31/54		MacPherson, Bob & Debbie 8/30
.		Phelps, Dan & Edith 8/16
.		Schwarz, Jim & Sondara 8/24
.		Staas, George & Sandra 8/24
.		Strode, Ralph & Trudy 8/09
.		Winters, Mark & Brenda 8/02
.		Ireland, Garry & Susan 8/14

ANY CORRECTIONS, ADDITIONS OR DELETIONS, PLEASE LET ME KNOW!

## **Navy Looks To Eliminate The Shakes From Its Submarines**

**Scott Wyland, Stars and Stripes, July 13**

In the Navy's ongoing quest to build a more stealthy submarine, service-funded research is close to yielding a new method for boat builders to test how much vibrational noise a sub will emit before it ever touches water.

The University of Connecticut research team's method sounds simple at first - much of it centers around studying a pair of modified, shaking tables - but years of complex math and advanced physics have gone into creating precise measurements for how much an individual submarine component will shake.

After seven years and \$1.6 million in funding from the Office of Naval Research, the researchers say the method will help submarine builders incorporate simpler, less expensive details into the design phase of the boats.

The research comes as the U.S. submarine fleet shrinks, due to the retirement of aging Los Angeles-class submarines from the Cold War era, while demand for submarine missions from U.S. combatant commanders around the world remains high. The Navy is building two Virginia-class submarines annually, but the 2019 30-year shipbuilding plan calls for an additional 16 to be built beyond that rate, in line with the White House's stated goal of a larger Navy.

Meanwhile, Navy officials say Russia is deploying its submarines more often and China has rapidly modernized its undersea program.

The Navy already uses sound-dampening technologies like polymer-rubber tiles and quieter propulsion to prevent detection by other navies, but in the undersea world, even tiny noises can tip off an adversary.

"The more quiet they can be, the better," said Rich Christenson, a civil and environmental engineering professor who advises the university's graduate students working on the project.

Christenson and his students add parts to the two shaking tables, which seismic engineers normally use to test how a structure will hold up to an earthquake.

The tables are hooked to a computer that tells them to jiggle the parts at the same rate as if they were installed in a submarine operating underwater.

A big challenge is devising the complex numerical models for the computer to run the simulations, Christenson said, adding that the team must consider how the water interacts with the submarine's structure.

Simulations are extremely exacting, he said, with movements as fine as 1/100 of an inch.

The precision required as they formulate algorithms for a slew of components is part of what makes the lab work so time-consuming, Christenson said.

"A lot of this stuff hasn't been done before," he said. "It's always something different, which is fun."

If the team determines a vibrating part is too loud, it looks at possible remedies.

A solution might be to add springs and dampers to equipment or thicken the padding between a component and the floor, Christenson said.

These are inexpensive fixes that can be a bigger, more costly hassle to implement after the submarine is assembled, he said.

Making these simple adjustments in design also could allow a builder to use off-the-shelf components instead of customized ones.

Electric Boat, a subsidiary of General Dynamics and one of the Navy's two primary submarine builders, has expressed interest in the testing, Christenson said.

Christenson first got the idea for the vibrational testing by talking to graduate students who were Electric Boat engineers, he said.

Electric Boat and Naval Research officials declined to comment, saying they couldn't discuss new submarine innovations in the works.

The immediate goal is to create a basic test that the university can publish in a journal and builders can adapt for their own testing, he said.

"Hopefully without too much effort, they can convert it to something very useful to them," Christenson said.

## **The Navy Has a Big Problem: Not Enough Attack Submarines**

Music to Russia and China's ears.

by David Axe

In 2018, the U.S. Navy has finally begun to come to terms with a long-term problem that has been decades in the making.

The fleet has too few attack submarines. And arresting the growing shortfall — never mind reversing it — could prove too expensive.

The Navy needs 66 nuclear-powered attack and guided-missile submarines according to a 2016 assessment by then-Navy secretary Ray Mabus. But in mid-2018 the sailing branch possessed just 56 attack and guided-missile boats — SSNs and SSGNs, respectively, in Navy parlance.

The current force includes 13 *Virginia*-class vessels, 36 boats of the *Los Angeles* class, three *Seawolves* and four former *Ohio*-class ballistic-missile submarines that, in the early 2000s, the Navy converted into SSGNs carrying non-nuclear Tomahawk cruise missiles.

#### **ecommended: Air War: Stealth F-22 Raptor vs. F-14 Tomcat (That Iran Still Flies)**

Despite the Navy purchasing two new *Virginias* every year on average since 2012, the 10-sub gap is likely to widen in the 2020s as older *Los Angeles* boats, which the Navy bought at high rates during the 1980s and 1990s, reach the end of their useful service lives.

Likewise, the converted *Ohios* are scheduled to decommission in the late 2020s.

The submarine shortage is the result of a long break in U.S. submarine production in the immediate aftermath of the Cold War. The fleet received just five new SSNs between 1990 and 1999. “In the 1990s, the Navy took a procurement holiday,” the Congressional Budget Office explained in a 2003 report.

The Navy anticipates that, with current average production rates, the combined SSN and SSGN force could decline to just 41 by 2029, a staggering 25-vessel shortfall.

“Where we sit today is, we can’t build ships and deliver them in time to fill in that dip,” Vice Adm. Bill Merz, a deputy chief of naval operations, told U.S. senators.

The Navy has, for years, known that it could suffer an attack-boat shortage. Prior to 2016, the Navy believed it needed just 48 SSNs and SSGNs over the next 30 years. But with the resurgence of Russia’s undersea fleet and China’s sustained production of better submarine models, the U.S. Navy’s needs changed — and underpinned Mabus’s new, larger force-structure goal.

Growing military budgets in recent years have allowed the Navy to invest in the submarine industrial base, which centers on General Dynamics’ Electric Boat shipyard in Connecticut and the Huntington Ingalls’ Newport News yard in Virginia.

Newport News alone began hiring 7,000 additional workers.

But much of the new investment is flowing into the expanding effort to replace the Navy’s 14 1980s-vintage *Ohio*-class ballistic-missile boats — the Navy’s contribution to America’s nuclear deterrent — with a dozen new *Columbia*-class vessels starting in the mid-2020s.

In 2018 the U.S. Government Accountability Office estimated it could cost \$128 billion to develop and build the *Columbias* — more than \$10 billion per ship, compared to an average cost of \$2.7 billion for a *Virginia*.

The high cost of the *Columbias* has stymied Congressional efforts to add *Virginias* to the Navy’s shipbuilding plan. The House of Representative’s Armed Services Committee voted to spend around a billion dollars buying long-lead components for a third *Virginia* each in the 2022 and 2023 budgets, potentially cutting the 2029 shortfall to just 22 vessels.

But the full House voted to strip that funding. The Senate has an opportunity to restore the funding, but it was unclear as of July 2018 whether senators would approve such a measure — and whether the House would ultimately agree to the change.

In the absence of dramatically larger budgets, the Navy is struggling to make up the attack-boat shortage in other ways. The fleet has five spare nuclear reactor cores and could use them to extend, by a the lives of five younger *Los Angeles* -class boats starting in 2019.

“That will not solve the problem,” James Geurts, an assistant secretary of the navy, told senators. “It will mitigate a little bit the worst part of the dip.”

The decommissioning of the SSGNs starting in the late 2020s poses its own unique problem, on top of the overall loss of submarine hulls. The SSGNs carry as many 154 Tomahawks apiece, compared to just 12 on an early-model *Virginia*.

Submarines account for around a fifth of the fleet’s total cruise-missile capacity.

The Navy has a vague plan to build new SSGNs on the *Columbia*-class production line sometime in the 2030s. But those boats wouldn’t be ready until the 2040s. In the meantime, the service is buying as many as 20 enhanced “Block V” *Virginias* that can carry 40 Tomahawks apiece.

The Navy hopes the Block V boats will help to mitigate a looming cruise-missile gap, in the same way that longer-serving *Los Angeles* es and a few extra *Virginias* might partially alleviate a shortage of attack submarines.

Music to Russia and China's ears.

by David Axe

But no one pretends that the U.S. fleet will have nearly enough submarines over the next two decades.

*This first appeared in WarIsBoring here*

### **Inside America's Aging Nuclear Missile Submarines**

**Sydney J. Freedberg Jr., Breaking Defense, July 16**

Imagine drifting off to sleep underwater in a tiny room with eight other people, with nuclear missile tubes on either side.

Need a drink now? Too bad, because, while in theory the skipper can authorize alcohol, in practice he never will. You can eat canned asparagus every day though, if you want, thanks to a quirk in Navy nutrition regulations. (It's unclear how much of it ends up compacted into cubes with the other garbage, weighted down, and dumped to the ocean floor). Oh, and as another health benefit, even though you live next to a mobile nuclear reactor, you get less radiation than the average American simply because you spend months at a time without seeing the sun.

Sounds less than homey? Well, apparently, you get used to it. That's according to the crew of the ballistic missile submarine USS Tennessee (SSBN-734), homeported here in King's Bay and currently tied up pierside for a refit.



Business Executives for National Security The missile compartment of an Ohio-class nuclear submarine. The entrances to the crews' sleeping quarters are to the left and right, reached by walking between two missile tubes.

There's an armed sailor in body armor standing guard on deck, plus trained dolphins and sea lions on watch for hostile divers. (Yes, really). When I and other attendees at a nuclear security conference here (courtesy of the DC-base Mitchell Institute and the local Camden Partnership) got the rare opportunity to tour a boomer, we had to leave our cellphones, cameras, and all other electronics behind before we boarded the Navy bus, which had been swept by security personnel and dogs. Even so, they never let us near the sub's reactor - but the front end of the boat was intriguing enough.

Inside the sub, the already cramped passageways were cluttered with temporary tubing. Every flat surface seemed covered by machinery being meticulously disassembled by several sailors, often standing with their backs nonchalantly to the two rows of 12 sequoia-thick silos that dominate the hull. The crew had even installed a temporary spiral staircase in their largest hatch to help them hustle in and out of the boat with supplies and spare parts. (Normally there're no stairs aboard a sub, just ladders).

Just to turn up the heat a little, literally, the sub's air conditioning had been turned off temporarily earlier in the day, while the boat moved berths. The reactivated A/C was still struggling to purge the July-in-Georgia heat from what is, after all, a big black metal tube with only a few hatches for ventilation. The only cool air aboard was right around the oxygen generator.

The generator looks rather like Hell's own espresso machine, but it actually splits ordinary water into oxygen - it's the only thing that keeps the crew from suffocating underway - and hydrogen (vented offboard with the carbon dioxide), which is an endothermic (heat-draining) reaction. But while I was wilting just walking around, the sailors I saw at work seemed undaunted.

Which is busier, I asked one sailor: Being out on patrol, or being in port for a refit? Refit is, he said, "by far." There's a lot of work to do in 35 days at home being heading out to sea for two or three months. Each sub actually has two crews of over 150 each, Blue and Gold, who alternate to ease the strain on sailors and families. Even so, a career submariner like the skipper of the Tennessee, Commander Paul Seitz, spends an estimated six years of his life underwater.

### **An Aging & Hard-Worked Force**

So nuclear submarines are used hard every year, and this one is 32 years old. In fact, Tennessee was the first SSBN homeported at King's Bay and the first boat to test-fire the Trident D5 missile. The other 13 Ohio-class nuclear missile subs stationed here and in Bangor, Washington were all commissioned between 1981 and 1997, and the US hasn't built another SSBN since. (The newer Seawolf and Virginia submarines are relatively small attack boats that don't carry nuclear missiles). The Navy's now hustling to design and build the \$128 billion replacement program, the Columbia class, with no slack left in the schedule.

Even so, Tennessee and her sisters will have to stay in service 42 years apiece before they can be replaced in the 2030s. The land-based Minuteman ICBM, the B-1 and B-2 bombers, and the Air-Launched Cruise Missile (ALCM) will also need replacements about the same time. The force also needs upgrades to aging nuclear warheads, Trident missiles, and the nuclear command, control, and communications network (NC3), as well as refurbishment of crumbling Energy Department buildings that in some cases date back to the Manhattan project. All that will put tremendous pressure on the Pentagon budget.

"Everything in that program delivers just on time to replace the old stuff," said Gen. John Hyten, the four-star Air Force officer in charge of Strategic Command, to the nuclear weapons conference here.

"Every leg of the triad is up against the red line in terms of recapitalization," agreed Rear Adm. John W. Tammen, director of undersea warfare (N97) on the Navy staff. "The green-eyeshade people have repeatedly delayed and delayed each of the programs. (Now), the bottom line is there's no additional margin for construction and delivery of Columbia." To reduce the risk, defense contractors have already started building missile tubes - some of which will go to the Royal Navy's SSBN program - as well as a full-up prototype of the new design's electric drive.

Is there any way, I asked, to squeeze some more years out of the Ohios, originally designed to last 30 years? "We have sharpened the pencils to get to 42 years," he said. "I don't think there's anything past 42."

So "we have to get Columbia done on time, (and) we are on plan to do that," Tammen emphasized. "With the current leadership designating the strategic mission as DoD's No. 1 mission, the resources are there."

In the meantime, there's some money to keep upgrading the existing equipment, but very selectively. So, like much of the US military, the sub is a strange mix of cutting-edge and vintage. There are plasma screens on the wall of the galley, the petty officer's "Goat Locker," and the captain's office/stateroom/tiny cell, that display the condition of the sub in real time, all the time once underway.

But a lot of technology dates from the 1980s when the boat was built, including key components of the fire control system for the ballistic missiles. It turns out "clunky but tried and tested" beats "new hotness that's mostly been debugged" when you're working with nuclear weapons. And no, the crew told us, one man can't launch the missiles: It takes at least two people turning keys at once in two different parts of the ship.

### **Saying "Thank You"**

Does the crew suffer any existential dread from living, working, and sleeping next to enough megatonnage to kill millions of people? Apparently not. None of these submarines has ever fired a shot in anger as opposed to testing, and the sailors naturally prefer it that way. The whole point of a deterrent is, if it's successful, you never have to use it. And while America's land-based silos are visible to orbiting satellites, and its strategic bombers often make high-profile flights abroad to assure allies and unnerve adversaries, the submarines' success lies in never being seen.

So it's easy to overlook the service of US Navy submariners, or for the matter the Air Force missileers who go to work every day in bunkers deep underground, standing ready for the order we all pray will never come. And this weight is on some very young shoulders.

Gen. Hyten recalled how one junior lieutenant, working at Malmstrom missile base in Montana on her first assignment in the Air Force, asked how he responded when people derided the work ethic of millennials.

"What I say is, if you want to see our country, get on my plane and come with me," Hyten said, voice breaking with emotion. "Come with me to Malmstrom, come to me to Kings Bay, and I'll introduce you to the millennials that do the job every day - and you will find that they're exactly the same as they were 20 years ago, exactly the same as they were 40 years ago."

"They love this country. They want to defend this country. They go to work every day," Hyten said. "They're amazing - they're smarter than we were, by far. They get motivated differently so you have to lead them differently, but their passion is just the same."

It was at this point in his answer to the young lieutenant, Hyten said, that he saw a tear start down her cheek. "It's pretty awesome that a missileer whose job is to sit on top of a nuclear weapon, a Minuteman III, takes her job that seriously," he said. "Just saying thank you means a lot."