



USS Cusk Newsletter

Fall 2018



"...Take in two! Right ten degrees rudder! All back one third! Watch your ears on deck!"

2018 Cusk Reunion Update: The venue has changed slightly but the 2018 Reunion is definitely on! Our dates will be April 2 to 6 (Monday to Friday) in Richland, Washington. If you're unfamiliar with Richland, it's in the Columbia River Valley just 207 miles southeast of Seattle. Hats off to Steve "Willy" Wilson who is coordinating the arrangements and a great agenda.

Lodging will be at the "Red Lion Richland Hanford House" in Richland. It's an excellent hotel and we are getting special USS Cusk Reunion rates of \$109 per night for a single or two queen bed room. This hotel is pet friendly and has plenty of amenities including free WIFI, complimentary breakfast, pool, exercise room, etc. Additionally, the hotel has extended these same rates to three days before and three days after our reunion dates for anyone wanting to arrive early, and/or stay afterward. There is also a Submarine Birthday Ball at the Yakima Base on the Saturday following our reunion.



Front and rear pictures of the Red Lion Richland Hanford House Hotel on the bank of the Columbia River in Richland

Reunion Banquet: You will be able to choose from great entrees of Sliced London Broil Beef with Au Jus, Char-grilled Salmon Fillet or Sage Rubbed Pork Porterhouse. All entrees include House Salad, Fresh Seasonal Vegetables, Rolls and Butter, Chef's Choice Dessert, soft drinks, water, beer and wine. Vegetarians will be able to indicate their vegetarian choices.

Reunion Itinerary and Activities: Most of the itinerary is still being planned, but we'll start with a 3:00 P.M. check-in on Monday afternoon and then meet in the Cusk's hospitality room for drinks and snacks. Activities for the week will be announced shortly and we'll have another newsletter out by the first of the year with all the details. The Cusk webpage will be kept up to date as well.

"Thunderbug" and Project Derby: It is well known that the USS Cusk was the first missile submarine of the U.S. Navy. The Cusk launched its first "Loon" missile in early 1947 near Pt. Hueneme, California. Although the Loon was primarily a copy of the Nazi's V-1 missile, there is much more to its history and how it became such an important part of the Cusk's legacy.

It began, of course, with the Nazi's development and use of the V-1 rocket during World War II. The US Army Air Force (USAAF) was impressed with this weapon, especially considering how many resources had been used to combat it. Following the invasion of Europe in 1944, approximately one ton of V-1 parts were captured and subsequently delivered to Wright-Patterson Field on 12 July. From these parts, 13 copies of the V-1 were built and renamed the JB-2 (Jet Bomb 2). It was nicknamed the "Thunderbug". From the War Department's point of view, the primary problem with this new weapon was its questionable guidance system and it was seen as having little use other than as a terror weapon, just as the Nazi's had used it for against England. Production was eventually authorized however and in July, 1944, the USSAF ordered 1,000 JB-2s to be built. Their plan was to order 1,000 per month and that order was to be increased to 5,000 per month by September, 1944. Republic and Willys were contracted to build the airframe and Ford built the engine. Northrop was responsible for the launch ramp and they had to design and produce it from scratch since no captured parts were available.

The first JB-2 was launched from Elgin Air Force Base in October, 1944, but success with the new missile proved hard to come by. Several types of launch methods were used including a 400 foot inclined launch ramp, a rocket sled on a flat ramp, a 50 foot trailer ramp, and two launches were conducted from a B-17G bomber. Only two of the first ten launches





USS Cusk Newsletter

Fall 2018



were successful, but by June of 1945, the failure rate was decreased from 80% to 22%. Enthusiasm had initially been high for the new missile system, but even with improved launch successes, it became apparent that the missile's limitations were many, and its costs too high. Production was ended in September, 1945. At that time, 1,391 JB-2s had been built.

The US Navy remained interested in the new technology however and at their request, they were allocated 351 of those missiles from the USSAF. The Navy's copies were renamed the LTV-N-2 Loon (Launch Test Vehicle-Naval). The Navy's plan was to enhance and test them under a program called "Project Derby" at Pt. Mugu, California. Unfortunately, the Navy had even worse launch problems as 79 of their first 84 launches failed with just a 6% success rate.

In late 1946, the Navy shifted emphasis of the program from surface ships to submarines, and the Cusk was selected to be the first test platform. Subsequently, on 12 February 1947, the first Loon was successfully launched from the USS Cusk as a ballistic missile, i.e., without the use of any guidance control. A month later on 7 March, the Cusk employed the missile guidance system (AN/BPQ-2) to successfully steer this second missile to a target area 105 miles away. More testing and improvements were made for the launch and guidance systems and by March, 1949, the launch success rate had jumped to 53% (37 of 70 launches). By then, the Cusk had been re-designated as the Navy's first missile submarine, SSG-348 and was equipped with a missile hanger which enabled the Cusk to submerge with the missile. She continued to be an integral part of submarine missile test and development for the Loon and Regulus missiles for over 14 years.

The Navy was never really very happy with the Loon however, and even as the Cusk continued proving the feasibility of submarine launched missile systems, work began on a new jet-powered cruise missile called the Regulus in November, 1947. The Cusk supported this new missile system as well until her missile days were finally ended in September, 1961

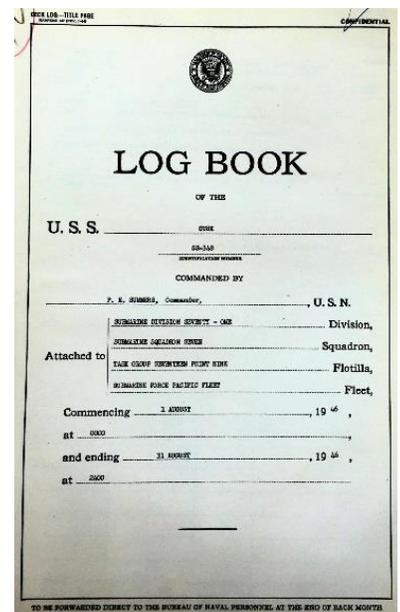
The Navy's missile submarines of today are, without question, the most formidable weapons systems ever developed by man. Their roots and their awesome capabilities are directly traceable to the USS Cusk and men who sailed her.

From the Cusk's Deck Log: These are excerpts randomly selected from the Cusk's Deck Logs in our National Archives in Maryland. This first entry is from New Year's Eve, 31 December 1958. The Captain at the time is LCDR Richard J Cooke and the XO is LCDR Frank M Murphy, Jr. Many, if not all of the Cusk's New Year's Eve log entries had a poetic and somewhat humorous tone. This one is no exception.

*"...Tis the submarine Cusk, side number three four eight.
We've got the watch this evening in a reluctantly sober state.
We are moored in sunny Pearl Harbor, Hawaii is the place.
Starboard side to berth Sierra Nine, at the U.S. Submarine Base.
With four strong lines of nylon, doubled secure and tight.
We are safely moored and securely snug throughout all revelry tonight.
The telephone and water, are coming from the pier.
Plus air and electric power, but not one drop of liquid cheer.
We're safe and sane and sober, with ships of the Pacific Fleet.
With Yard and district craft, the New Year we joyously greet.
CINCPACFLT is number one honcho in his headquarters on the knoll.
May the bells of lasting peace, throughout the coming year toll.
May the world know joy and happiness, through the next short year.
We wish you all the very best, for 1959 is definitely here.*

(signed) C.L. Coleman, LTJG USN."

More Deck Log Entries - Ringing Audie's Bell: Sometimes, crewmembers were injured, usually in the course of their duty, and sometimes from other causes. This incident happened while the Cusk was in Bremerton, Washington completing a major overhaul. The Captain was LCDR Don Killian, and the XO was LCDR Denny West. Two messcooks were involved, one to be unnamed, and the other was Jerry "Audie" Johnson. They were loading stores where the unnamed messcook was topside, and Audie was below helping "Jonesy" put away the stores. The unnamed messcook wasn't a particularly bright person to say the least. During the course of loading those stores, without looking, and without warning, he dropped a 100# sack of potatoes down the After Battery hatch. It landed directly on top of Audie's head, knocking him unconscious to





USS Cusk Newsletter

Fall 2018



the deck. Needless to say, Audie ended up in the base hospital where he soon regained semi-consciousness, but no memory of what had happened. Although he sustained no broken bones or permanent damage, it would be several days before he was coherent enough to resume his messcook duties. The date was Wednesday, 26 October 1966.

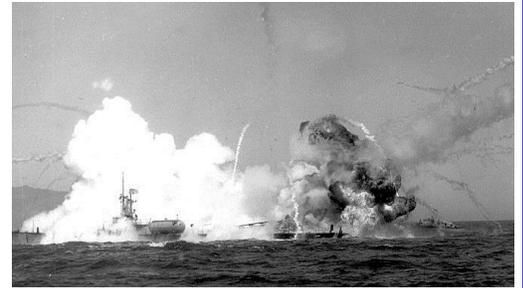
"...08-24 Moored as before. 0800 Held quarters for muster and inspection. Absentees: None. 0815 While taking on stores, Johnson, J. L., B60-21-57, FA, USN, had a 100# sack of potatoes dropped on him through the after battery hatch. Injury not due to his own misconduct. Treatment administered by the Medical Officer, USS Sacramento (AOE-1).

Disposition: Taken to U.S. Naval Hospital, Bremerton, Washington, for further examination and returned to duty.

(signed) T.M. Kosoff, LT USN"

Fortunately, for the rest of the crew, the offending, unnamed messcook was never able to qualify on the Cusk and he was eventually transferred to the surface fleet. How, you might ask, did such a moron get assigned to the Cusk in the first place? No one knows. He and another E-2 (who was also unable to qualify) had been transferred to the Cusk directly from boot camp, which perhaps further validates another one of the reasons for Submarine School.

Cusk Trivia: The adjacent picture is of a failed Cusk Loon launch on 7 July 1948. How did this incident and other lessons learned from the Cusk's launches contribute to the development of the Polaris Missile submarine?



Eternal Patrol: The sad news below lists our shipmates who have departed on Eternal Patrol in the past year. Each man was a fantastic shipmate and all will be sorely missed. Where available, pictures and obituaries may be found on the Cusk website on the 'Eternal Patrol' pages at this link (www.uscusk.com/Eternal.htm).

Name & Rank	Served aboard Cusk	Departed
Joseph H Lowenhardt, EM2(SS)	1960 to 1963	7 August 2016
David P Hirt, QM3(SS)	1951 to 1953	22 August 2016
Arthur "Art" O'Meally, RM1(SS)	1964	5 October 2016
William Hale Gignac, EN2(SS)	1958 to 1959	7 October 2016
James F "Jim" Johnson, RMC(SS)	1967 to 1968	29 November 2016
Roger Hathaway, EN3(SS)	1960 to 1961	11 December 2016
Chuck Harner, LT	1960 to 1963	1 March 2017
Richard Rushlow, ET1(SS)	1953	4 March 2017
Robert J Strosser, TM2(SS)	1946 (Plankowner)	6 March 2017
Mike Keelin, STS2(SS)	1962 to 1965	31 May 2017
Phillip L Williamson, TM1(SS)	1945 to 1946 (Plankowner)	5 July 2017
Ron Shook, STC(SS)	1959 - 1961	12 July 2017

SAILORS! REST YOU OARS!

Sea Stories: If you have one, please share it. We'd always love to hear one of yours. This one came from Gary Long (59-61) who shared a humorous but sweet memory of Chuck Harner:

"Just a quick story about Chuck. As an EM3, I was assigned to water the batteries, and at that time you had to have an officer witness the water test by the battery water tester machine. I took it to then Lt Harner, and lo and behold we kept coming up with a high salinity reading! I checked every valve and anywhere we could have gotten contamination. After the third failed test, he finally told me what happened. Seems that to clean the water sample receptacle, he had used his finger, which had just enough salt on it to show a bad reading. Scared the hell out of me at the time!"

"Fun on the Cusk": Thanks to Nelson "Maynard" Greer (65-66) for this excerpt from his story about life in the Cusk's Engine Rooms. This one is about some problems with the heads on our famous "Jimmy" engines.

"...We all know the Government would rather waste a dollar and do nothing more than spend a dime to fix a problem. Here is a story to illustrate that truth. The General Motors 278-A diesel engine has four exhaust valves in each of its 16 cylinder heads. The valves have two grooves near the top of the stem. Two 'keeper' halves fit around each valve and have two ridges (called 'lands') on the inside that fit into the valve grooves, while the outside of the keepers fit into a tapered cup that sits on top of the valve spring. The keepers keep the valve connected to the spring. For you non-engineer types, the





USS Cusk Newsletter

Fall 2018



spring holds the valve shut whilst fuel is exploding inside the cylinder.

The Cusk received a large shipment of refurbished heads prior to deploying to WestPac. We overhauled number Two Engine using 16 of the 'new' heads just before getting underway. It ran just fine in port. Departure day dawned, and we headed toward the Land of the Rising Sun. A couple days out and suddenly, 'Bam, Bam, Bam, Bam'! Shut that engine down, there is something wrong there! We pull the valve covers and, hey, here is the culprit, an exhaust valve is missing, and the only place it could be is between the piston and the head. Diesel engines have a 16 to 1 compression ratio, so there ain't a whole lot of clearance in there.

So we yank that head off, and there is our mangled valve laying on top of one very beat-up looking piston. The bottom side of the head has matching scars from the wayward valve. We strip the head, salvaging the salvageable parts. "Hey, these valve keepers only have one land", says some sharp sighted sailor. The valve keepers need two lands so are only doing 50% of their job. We check the spare head we are about to slap on. The keepers have just one land. We check all of our recently received spare heads, same thing. No choice, we gotta use the crappy keepers. Next day that engine goes 'Bam, Bam, Bam, Bam' again, same story, different cylinder. And so it goes for the two weeks it takes us to reach Yokosuka.

We figure we can just get some new keepers from the supply system in Yoko and the problem is on its way to being solved, right? 'Supply' had plenty of keepers in stock and they sent 'em right away. You guessed it, all of them were the new "improved" one-land type guaranteed to drop the exhaust valve into the cylinder while the engine was running. Frantic phone calls were made, but no one gave a shit. "Don't you know there is a war going on down south?"

The joke on Jimmy boats was that if there were two coats of paint on the bulkhead outboard of the engines, you would have to chip off one coat for clearance in order to slide a head up off of its studs. Not a lot of working room out there, and hotter 'n hell if the engine has been running. Changing an outboard head at sea was way low on our list of favorite things to do. The cool waters by the dock in Yokosuka kept the engine room at a comfortable temperature, so we formed a plan to avoid future pain. We moved the five gallon cans of coffee, flour, and sugar we had stored there and pulled all eight heads off the outboard side of that newly overhauled engine. Then we took the eight most easily accessible heads off the inboard side of the other engines, installed the good ones outboard, and replaced them with the shitty heads. Now we knew the cylinders likely to fail were easy to get to.

After a while we were champion head changers. Four hours after hearing that dreaded 'Bam, Bam, Bam, Bam', the engine would be on the line again. If there was a puka in the piston, add two hours. Lacerated liner, add another two hours.

These heads weren't the dinky things like on your lawn mower. They were over a foot square, and maybe 8 inches thick. They weighed 186 pounds. The circumference of my wrists grew an inch that WestPac trip. I could just barely lift one and carry it around. Lonnie Moo was about 5 feet tall and 6 feet wide, and he could lift one in each hand and waddle down the passageway. A point of pride was being able to cradle a head in your arms, and step through the hatch with it into the other engine room. The chief was keeping track and said we had changed 96 heads by the time we got back to Pearl!



'Lani Moo' Johnson standing near the stills in FER.

As for liberty, if you were there in those days, you remember what we did in Honcho 1, 2 and 3 in Yokosuka, or in the Wan Chai District of Hong Kong, and on Olongapo's Magsaysay Drive. If you weren't there, you can only envy us.

Damn, we had fun!"

USS Cusk 2018 Hotel Registration: Red Lion Hotel Richland Hansford House: 802 George Washington Way, Richland, Washington 99352. Phone: **1-800-RED LION, (800) 733-5466** Online Reservations: www.RedLion.com

Contacts: Jessica Schafer, Senior Area Sales Manager - Toll Free: **(800) 910-9291**, Hotel Direct: **(509) 946-7611**

Steve Wilson, USS Cusk Reunion Coordinator - Cell: **(509) 539-8791**, Email: subs566@gmail.com

Cusk Trivia Answer: The Navy had initially planned to launch missiles from surfaced submarines, but they eventually realized the serious strategic and safety drawbacks. The submarine was very vulnerable during the time required for missile preparation and launch. Rough seas was another problem, and as the Cusk proved, missile accidents could be very hazardous to the submarine and her crew. Therefore in 1955, the Navy decided to develop a missile system that could be launched from a submerged submarine.

"...All Stop! Port back one third! All Stop! Put #1 over as soon as you can!"

