

# VADM Nils R. [Ron] Thunman

April 21, 2015

Interviewed by Captain Leonard Wass

Transcribed by Unknown

Edited & revised by VADM [Vice Admiral] Thunman<sup>1</sup>

Wass: We are recording an oral history of Vice Admiral Nils Ronald Thunman, retired naval admiral from the [Commander, Submarine] Submarine Force [US Specific Fleet]. Today is the April 21, 2015. Admiral Thunman has traveled from Springfield, IL to Chicago to the Pritzker Military Library and museum in order for his oral history [... taping]. We remarked before the video was turned on that if he recorded his entire history in the [US] Navy that we would be here for weeks. We are going to have to summarize and just hit certain highlights... What we plan to do with this oral history is to divide it into four main categories, starting with his early years in the Navy after his graduation from the [US] Naval Academy and his youth. And then his early years in Nuclear Power as an officer on various submarines. The third part will be when he commanded the submarine force in the Pacific, or in naval terminology COMSUBPAC [Commander Submarine Force US Pacific Fleet] and finally the pinnacle of his career when he was Deputy CNO [Chief of Naval Operations] for submarine warfare in the Pentagon.

Thunman: It's a pleasure to be here and I thank you all for doing this. We came to Springfield in 1940. I was the third, youngest in the family. My parents are immigrants from Sweden. My father was an illegal immigrant. Had jumped ship in New York City, he had shoveled coal on a Norwegian Steamer and wandered around and was grabbed by a Marine recruiter. In those days, in 1921, you didn't need anything other than to be strong and healthy. That's how he got his citizenship on down the line. He was a magnificent man. I was appointed by the local congressman after a lot of effort by the Academy to get me to come by a very famous man in the Academy's History, Rip Miller who was the athletic director, the Navy football field is named after him.

Wass: He was one of Notre Dame's "seven mules" on their "four horsemen" team.

Thunman: Rip brought me to Washington after I graduated to visit congressman in order to obtain an alternate appointment to take the Naval Academy entrance examination. He made a deal with my local congressman, Congressman Peter Mack, that if I passed the exam, Congressman Mack would give me an appointment. I got third alternate appointment from Congressman Sasser from Maryland. I passed the examination, but Congressman Mack decided not to give

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<sup>1</sup> VADM Thunman had rephrased parts of the interview after reading the initial, near verbatim transcript.

me an appointment. So, I accepted a football scholarship to the University of Illinois. That summer I was working as a laborer on road construction and a bottle blew up cutting the muscles in my left arm. Consequently, I could not play football during the fall season. The following spring, a local businessman, John Hobbs, convinced Congressman Mack to give me an appointment. I arrived at the Academy the day before the Korean War started. I took the physical examination and was surprised to find out that I was color blind. I figured I was off to was in Korea and headed out of the Academy grounds. But I decided to say goodbye to Rip Miller because he had been so kind to me, and I went back to visit his office. When I told him that I failed the color-blind examination, he said that was impossible! He immediately called the Academy hospital and told them to give me examination. The doctor helped me in the examination, and I passed. The first year I played freshman and tore the ligaments in the right knee. The doctors told me my football career was over. In those days they couldn't fix that type of knee injury. I wore a knee brace during athletic training and barely passed some of the requirements. I enjoyed the Academy. I stood 113 out of 854 graduates in the class of 1954 and graduated as a regimental commander with a superintendent's letter of commendation. I was proud to be a graduate. I was kept at the Academy from three months to mentor the new midshipmen, "plebes", during their first summer. One of my thirty plebes was John Sydney McCain who later became a Senator and a candidate for President. We made him compete in summer boing competition and he was tough and fearless. Senator McCain is a good friend today.

Wass: At this point, I wonder if you would tell me about some of Admiral Rickover's remarkable background that you learned in your association with him.

Thunman: Admiral Watkins and I were the only naval officers at his retirement dinner which was attended by many members of [US] Congress as well as his closest friends. Admiral Rickover spoke at the dinner and told about his family and how they come from Poland which belonged to Russia in the early 1900s. His father came to America first and then he and his mother followed. He described his mother had driven a horse drawn cart with him beside her and how the Russian Cossacks would slap their swords on the flanks of the cart's horse and laugh. His father was a tailor in Chicago. He said he was ambitious during his youth. He was very proud that he was the only Western Union messenger assigned to the 1916 Republican Convention in Chicago. He managed to get his picture taken with the nominees, and it appeared on the front page of the Chicago newspaper. I'm sure you can find the paper. I later heard how he received his appointment to the Naval Academy. His uncle was the head of the draft board in Chicago during World War I and there was a congressman there that didn't want his son drafted. The congressman and Rickover's uncle made a deal that young Rickover would be appointed to the Academy if the congressman's son was not drafted. Another good story is hot he for the initial G in his name Hyman G. Rickover. He

said that when he entered the Academy everyone else in the enrollment line signed with a middle initial so when it came time for him he inserted the G in his name.

Wass: [Chuckles]...And you graduated in 1954, ranking second in your class for aptitude, which is fitness for the naval service, which quite an honor. And I understand there is some fiction going on about Admiral Rickover that he was not liked by his classmates and I think you have a totally different story.

Thunman: Well, there was another Jewish midshipman in his class. Class of 1922. Name was Kaplan; really bright guy stood one or two in his class. His classmates hated him, because he was so arrogant, and he would never do anything to help his classmates. So he had to live alone. And in the yearbook, the 1922 yearbook and I have seen this, some people will argue about it, but it is the truth, in the yearbook, Kaplan's page that showed his picture was perforated. So that you can tear it out. It was unnumbered so the numbering continued properly even without it. There were two midshipmen on each page. Only one on Kaplan's page and the other was a cartoon of a guy, guy's profile, and in those days your roommates wrote your biography underneath your picture. Well, nobody would write his biography, so he wrote his own biography for his picture, a great biography, which ended up for further information see Who's Who in 1930. And somebody had written a biography of the cartoon character which had just completely made fun of Kaplan. Now the other midshipman was Rickover, a Jewish Midshipman, he said at his retirement dinner that people have said that I had problems because I was Jewish, he said, "I really didn't." If you read his biography in the yearbook. It talked about him playing the guitar and nothing indicated that his classmates didn't like him.

Wass: Good. And when you graduated from the Naval Academy in 1954 there was the policy then that graduates, destined for the submarine force had to serve on surface ships....

Thunman: Yes.

Wass: And in my era in mid-'60s, we were direct inputs into submarines. [ADM, your first ship was a destroyer, the Shelton, USS Shelton DD-790 and you held several posts there,] ultimately the chief engineer, command duty officer, OOD [officer of the day]underway, deployed to WESTPAC [Western Pacific] and visiting Japan, Philippines, Australia, the Great Barrier Reef and Fiji; Thailand and Hong Kong, what I found fascinating was your experience at the Bikini Atoll with the atmospheric nuclear blast that were taking place in an era we knew very little about radiation. I wonder if you might talk about that.

Thunman: [Two destroyers participated,] there also was a small carrier and small auxiliary to conduct the tests at Bikini of nuclear weapons. The actual weapon themselves, not experimental weapons. They wanted to test every weapon. Our mission there was to track the weather, also do some other support. They put a special rocket on our five-inch [guns], so that we can track the weather and the fall out at 100,000 feet. We didn't know anything about it [the effects of nuclear weapons] [Chuckles]. And the commodore made me the radiological controls officer for destroyers. We installed a wash down system, plastic piping. I got a book that the Navy had, the ABC warfare manual; Atomic, Biological, and Chemical Warfare Manual which really taught the basics. We had dosimeters that were quartz dosimeters that we would mail in every couple of months and the Defense Nuclear Agency in Washington maintained them [records of them]. We had pocket dosimeters, except they were really worthless and every time that I went into the engine rooms mine would peg. We would detonate one of the weapons and then very quickly go into the area where the weapon had been detonated and we never took any precautions about making water from the salt water that was in the vicinity, we never were worried about the atmosphere and the fall out as much as we should have, I remember calling the commodore one night and I said, "I am waving a radiac meter around and I'm reading a high level." And he said, "Well, let me know if it gets any higher." I mean none of us knew any better. And I and a chief would get out on deck and unplug the washdown nozzles and we would be in our swimming suits. We would go back into the ship and we would take big brushes and [Fels Naptha] soap. Scrub our toenails and fingernails to try to remove the radiation that we could measure on a radiac meter. The most spectacular weapon that was detonated was the H bomb. I am not sure, never been able to determine if it was the first or the second. It was a half a megaton; it was fifty miles away. We went from a condition early in the morning, the dark of night to high noon. And there sat out on the horizon this incredible fireball. Which ended up as this mushroom cloud after a couple of minutes, [I never in my life experienced saw anything like that, I mean a, I remember seeing that and looking up at the five-inch gun and saying,] "Why do have a five-inch gun?" A young guy I mean I was, it completely changed my idea what warfare was all about. [The other tests were in the range of 80, 90, kilotons.] Some of them were torpedo warheads, some were I guess artillery rounds; I mean there was a whole gambit of weapons. At the end of that time, it was clear to me that, oh my God the world, everything has changed. Anybody that's got this can control the world. [And that was even obvious to a young officer.]

Wass: And I understand that know you have some medical issues that are traceable back to those explosions?

Thunman: [Well, I have doctors, who think so] I... we were all exposed. We were all tracked carefully by the Defense Nuclear Agency, now the DoD [Department of Defense].

Today if you have cancer and you had been on the operation in any capacity. They will give you \$75,000. My problem is a neuropathy, an idiopathic neuropathy with my legs. I have lost a lot of strength in my legs. I also have back problems but that is separate. But I have had several doctors, good doctors who've tried to figure out what my problem is. They've said, "You know it's remarkable that you have this situation and you've been exposed to that radiation." My eye doctor said he is convinced based on the condition of my eyes. But that's a long time ago.

Wass: So, after you left the Shelton, as a LTJG [Lieutenant Junior Grade], I understand that you became the youngest commanding officer in the Navy at that time. Can you talk a bit about that?

Thunman: [Well they had a couple of small ships that had problems.] They were experimental patrol craft escort rescue ships. They were World War II PCE's that had been modified to support the [US] Naval Electronics laboratory. One in San Diego and one in New London. And they had troubles, they had warrant officers there, and so they decided to give them to young officers as an experience kinda steppingstone. It was quite an assignment for a young guy, twenty-five years old, JG [junior grade]. We had five officers and fifty men. We were 1,000 tons and 190 feet long and operated up and down the west coast and in the Gulf of Alaska, supporting submarine sonar research at the laboratory. I learned a lot about sonar and I... it was a great experience for me, because I learned a lot of seamanship. I... I at least prided myself when I left that job that there wasn't any better ship handler in the Navy. I anchored and I'd done just about all you can do, towed ships, towed targets, ...had a lot of fun because we could visit all the little ports along the coast of California. The crew loved it! They...and I had these big...these two 26-foot motor whale boats. So I could just go and anchor and have liberty and the crew could go ashore in the motor whale boats. It was a... It was a fun thing, halfway through though I was called back to Washington to be interviewed by Admiral Rickover for the...the Nuclear Surface Program. At that time I had...I decided that I wanted to go into submarines. And so...I told them, "Well, I'd like to go in the program, but I wanted to go into submarines." Well, they kinda beat me up about that. Capt. Dunford, he said, "You ought to think about this carefully. If you go into submarines you better do well in Submarine School. You know and I'm not so sure that we will ever take you." But I left there; it was quite an experience for me because at the time I remembered, "My God, ordered back to Washington to see who? Ah who pays for the airfare?" [Laughs] That was one of my concerns...and one more point about the Marysville, I turned out.... turned from a boy to a man in that tour. Once we went... got to sea and all of a sudden, you couldn't see the shore anymore. I realized that.... that I was the guy who was going to decide what we were gonna do. And we had difficulties in real heavy weather and other things that could have been catastrophic. So

afterwards, I was very serious about what went on in... a ship. Never took a lackadaisical attitude about it.

Wass: So you did get accepted into Submarine School?

Thunman: Yeah, I went over to see the detailer, after I saw Rickover's people to tell them I had applied. They would hardly talk to me. Apparently, I was an issue that they didn't want to get involved with. And they said, "Well yeah, we'll see." And I was accepted for Submarine School. Worked very hard because I knew I'd had to if I was going to get into the Nuclear Power Program and... and I stood first in my [Submarine School] class. I won the watch, one of the best things that happened to me in Submarine School though was when I got there, I...I thought, "Well, I'm gonna flunk this color-blind test." Because they gave it...they gave the test the right way, under special daylight and all of the cards that were associated with it. Failed it cold! And I thought, "Well, that's it, I'm probably out of the Navy now." And uh...They said, "Well no, we'll send you up to the medical research lab." And I went up there and there was a young gal there. She sat down with me all afternoon; I was taking different tests. She was an expert in colorblindness. Finally, I said to her, I said, "Well, you know I have to admit to you that I've had trouble with this before, I'm sorry. I guess I'm not qualified." And she said, "Oh no, you are qualified, you're so interesting that I wanted to get a lot of data on you. You're the type of person who sees all colors at the same brightness. So that you can't pass the test." And one point about that woman... later on when I was in the Pentagon as a vice-admiral, I...my aide came in one day and said, "There's a woman from the Naval Medical Research Laboratory that would like a picture of you, signed." He had kind of a twinkle in his eye; he thought maybe this was an old paramour of some sort. And I asked him about her, and I realized [she was the lady at the research lab who passed me] who it was, and she was retiring. And I called the flag-officer there and I said, "Look, I want the finest retirement that you can put together, cake, the whole bit, whatever it is I'll pay for it. And I'll be up there." Because she had been the one who had taken the load off my back.

Wass: So you... after graduation, stood first in your class out of 162 students ... you were assigned to the USS Volador, but then quickly you went into the Nuclear Power Program. Can you talk about your early years in submarines and what you accomplished and what you learned? Because you were in that period of.... of taking the.... the real transition from World War II diesel electric submarines into the modern nuclear fleet.

Thunman: Yes. Well, it was a great year. You learned to be a submariner on those diesel boats. And you learned that you were dealing with a crew who was probably smarter than you are and the only reason they weren't officers, is because they hadn't gone to college. You learned about professionalism, excellence and... in

that particular assignment...the skipper assigned me every job in the one year that I was aboard, every job in the submarine: gunnery officer, supply officer - I ended up as the chief engineer; navigator and at the time, although he didn't say it, I think that he felt was that since I was a little late coming into the submarines, that I need to have a full spectrum of experience. But I learned a lot, I learned submarining I was called back for an interview by Admiral Rickover and... that was quite an experience. I'll go through that if you want.

Wass: The interview with Admiral Rickover?

Thunman: Yes, with Admiral Rickover.

Wass: Please do, because he is legendary with his interviews!

Thunman: Yes, I went back, I was getting ready to go in to see him and Capt. Dunford said to me, he said, "Are you gonna tell Admiral Rickover that you'd ever been here before?" I said, "No, I hadn't planned to." He said, "Yeah! Don't!" [Laughs] I went in and, of course, when you got interviewed you didn't get a chance to sit down, although I guess others did, I didn't, I just stood there and he yelled, "Thunman!" he said, "Your nothing but a dumb football player! A big punching bag! You weren't even a good football player! We're going to examine you, and you've got to eat, work, sleep, and study, study forty hours a week for three months. Come back for an examination. And I want you to keep track of how many hours you study. And that's all!"

Wass: And those were the famous last words "That's all" meant turn around and get out of there and do what he told you to do! [Laughs]

Thunman: [Laughter], and...so I went out and they gave me a big study guide and several books. And I went back to the ship and I told the captain. In those days in the "Diesel Community", they didn't like,...there was a separation between the "Diesel Community" and the "Nuclear Community" in those days.... I told the captain and he said, "That's ridiculous! You're prostituting yourself!" My division commander said it was wrong and my squadron commander said it was wrong. They were all interested in the interview. And the skipper said, "Well, you can't study on the ship." And I was chief engineer at that point, so I worked at studying though, and I worked at the study material; physics, reactor theory, those kinds of things. And .... Went back in September and took the examination, it was kind of an interesting exam, there were a lot of tricky questions in it, I won't go into them, but you kind of really had to know what you were talking about to answer some of them right. So I went back in to see him and he said [that] I got to sit down this time. "Well, you did pretty good." And that's the first time and I think the only time in my dealings with Admiral Rickover that he ever said that I did anything good! [Laughter] And but he said that, and it was a great

shock to me. Then he said, "Did you have anyone encourage you to go into the Nuclear Power Program?" Well, of course everybody that I knew had discouraged me, but I said, "Yes, Sir, my executive officer had encouraged me." He said, "What's his name?" and I gave him the name. He said, "Do you think I'd do anything to someone, if they hadn't encouraged you?" He was referring to the fact that I didn't talk about my captain or anybody else. That was a tough question. I looked at him and said, "I don't know, Sir." And he looked at me and he said, "That's it, out." In the outer office, and Dunford was there and he...Dunford went in and then came back out. He said, "Okay. You're starting Nuclear Power School 2nd of January, Mare Island." This was about the 10th of December, but we ripped it up our household and off we went. And it was a new school that was established there. The shipyard set up the school in old World War II barracks. Rickover had gotten his instructors from all over the country. He made all kinds of [young college graduates] ensigns and brought them in as an instructor. I still remember the math Instructor; he taught the new math. He had a PhD from Northwestern. I swear I still don't remember or could figure out exactly what he was ever talking about. He was so far off in the theory of. Any case, we passed. There were six of us. Interestingly the other five of that group now are all dead from cancer... Now that does not, that doesn't mean that that the Nuclear Power Program caused it, but they're all gone. We went from there into prototype training. And I went on to Windsor Locks, Connecticut at what was called the S1C prototype. ... It was the Tullibee propulsion plant. I qualified [as] engineering officer of the watch and I tried to lobby and get aboard the USS Thresher, which was the newest nuclear attack sub coming on the line. Failed completely and got assigned as Instructor at Nuclear Power School in New London. Actually, that turned out pretty good. I was teaching sailors and I learned how to teach sailors to strive to learn a lot of things they don't know. We moved the school to Bainbridge, Maryland, which was a pretty funny affair. Rickover had argued with the Secretary of the Navy about wanting to move the school out of New London because of the bad habits that everybody was learning in New London. The Secretary of the Navy had said, "No, we don't have the money to do that." Then Rickover noted that they had moved the Navy Music School. So he went back to the Secretary of the Navy and said, "Well, you have the money to move the Music School. You can move my school." He said, "Okay". He gave a little money. Rickover didn't need the money; he already had the money from everything else that he was doing. I got sent down there, my....my Captain Ralph Carnahan, wonderful guy, nuclear submariner. I looked at this place and it was a mess! It had been a World War II training facility, and no one had maintained it anyway. Buildings were falling down, holes in the roof. I went back to see Carnahan and I said, "Sir, I... I don't know how we can get down there in a few weeks like we are talking about." He said, "We're going to do it!" So we packed up everything up into moving vans. Desks, books; sailors, shut the doors and took off. The drivers of our moving vans, which we rented, were chief petty officers that we qualified up on the athletic field there in New



London. They were jack knifing these trucks all over...all over the place for a couple of weeks, and we came down there. This is about six weeks after I'd been there. I couldn't believe what had happened. I mean the place had been magically reconstructed! I'm sure that every painter, carpenter, engineer that existed in Maryland had been...come down and put that place in commission, using Rickover's money that had he, of course, got from the AEC to be used for training.

Wass: And, that's where I attended Nuclear Power School in the autumn of '64 and it was old but, very clean and neat. I will never forget the sign that you put up, "That in this school, even the smartest must work as hard as those who must struggle to pass."

Thunman: That's probably a sign that came from Rickover.

Wass: It is!

Thunman: I remember him coming down [...to visit] after we got going. He sat with us, few instructors. Frank Kelso was one, later the Chief of Naval Operations. [...Rickover said], "It's so important we teach high standards and excellence and that we maintain those same standards throughout the entire course." And then he said, "I don't believe you're working these people hard enough and that you're teaching them enough. So I'm going to give all of them an examination after they have completed your course. To see if they really know what the heck is going on." He did, his people put together an examination, really a good one. I remember looking at it, and it had been done in a very professional way. The young students did pretty well. So, he was pleased with us. We...but you know, we wrote our own textbooks down there.[... He sent a PhD Physicist from KAPL [Knolls Atomic Power Laboratory] to teach us the basic elements of Reactor Theory and to emphasize how important it was to cover that area in our instruction of both officers and enlisted. We wrote the textbook "Reactor Principles", and I believe that text is still used in the nuclear power schools. On completion of my assignment to the Nuclear Power School, I again requested to go to the USS Thresher but was ordered to the USS Robert E. Lee [Blue] instead.

Wass: One of the first fleet ballistic missile submarines, the 41 for Freedom.

Thunman: The 601. Chuck Griffiths, later Vice-Admiral Griffiths, was the skipper. We conducted a very important operation when I was aboard. We were pulled all the line and six exercise warheads were loaded in place with actual warheads. We went to sea to test those missiles using standard procedures for preparation and firing. It was a DoD test and observed very closely by the Weapons [Systems] Evaluation Group called WSEG. It was the second complete operational test of the Polaris missile weapon system [i.e. a nuclear-armed submarine-launched

missile]. The SSBN<sup>2</sup> George Washington had conducted the first test and failed. The future of the SSBN program was at stake based on the results of our operation. We simulated a patrol status and in the middle of the night received the order to fire. We fired six exercise missiles with three hits, range 2000 miles. Fifty percent was the design effectiveness of the SSBN missile system, so we passed. I was the driving officer and had considerable difficulty maintaining the ship's depth as we fired missiles. I ended up blowing the main ballast in order to keep from sinking out of the required depth band. But it worked out okay. Another unusual happening aboard the Robert E. Lee occurred when President Kennedy was shot. We were at sea patrol when COMSUBLANT [Commander Submarine Force Atlantic] sent us a message that President Kennedy was had been shot and it may be a conspiracy. The captain passed the word to the crew over the general announcing system, and we must be alert for all-out war. About two hours later, COMSUBLANT sent a routine weapons system test order, called WSRT to test us. In this test you followed all of the standard procedures for firing except for opening the missile hatches. The captain's policy was to order over the announcing system, "This is a drill." The OOD forgot the order, "This is a drill". When he ordered, "Man Battle Stations Missile" over the announcing system, and we thought we were going to war. I will never forget the look of terror on the crew's faces as we tumbled out of our racks headed for our battle stations. For a few minutes, most of the crew thought that a nuclear war had started. Nevertheless, they headed to their assignments without question or delay. The captain was in the head when the WSRT order was received and had difficulty pulling up his coveralls in order to get to the conn [control area] and pass the word, "This is a drill." That was the only funny part about this story. It was a terrible feeling for a few minutes to think that the end of the world as we knew it had come.

Wass: And a year before that, you were at sea on the [USS] Lee when you learned that the [USS] Thresher had been lost off New England.

Thunman: Well, that was the patrol before that, but yes.

Wass: On, patrol.

Thunman: We were down..., we were just proceeding to go down and do a deep dive coming out of refit. We heard about Thresher and went down to our test depth and we, I tell ya, we really inspected that plant, because we knew somebody had been lost, probably because of a failure in the plant, at deep depth.

Wass: So, after your tour ended on the Lee, you went to the fast attacks [submarines], one of the first fast attacks, the [USS] Snook.

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<sup>2</sup> SSBN stands for submarine or submersible ballistic missile nuclear powered.

Thunman: Yes.

Wass: SSN-592<sup>3</sup> [USS Snook] as it's executive officer.

Thunman: Yes.

Wass: We talked about....

Thunman: Just leading up to that a little bit, after my first patrol on the Lee I was acting chief engineer during that off-crew period. Rickover called in all chief engineers. I always thought this was a great thing to do. Called us to Washington, sat us down, and himself personally went over the new procedures for Emergency Heat up rate, you probably know about. Emergency procedures that you would use to maintain propulsion in an emergency. Then afterwards, asked us questions, wanted to know if we had questions. He was right in the middle of it, his people were all there. It was a very personal thing. He wanted to be sure, not the captains, although they were certainly briefed at some level, but the chief engineers were briefed, I thought that was a great thing to do after the loss of that ship. The other thing was... I had never qualified as a chief engineer; I was getting ready to take the test on the Robert E. Lee. We came off the patrol, the second patrol and I had orders to the Snook to be the executive officer I thought something was wrong because you had to be qualified to be a chief engineer to go as executive officer. I called the detailer and I said, "You know I'm not qualified as on a chief engineer?" He said, "Yes." He said that Rickover had approved it. Now whether he personally did or not, that's what he said. So off I went to be the executive officer of Snook.

Wass: While you were on the Snook, you did a lot of fascinating things and I think became aware of special operations on submarines, which continue to this day. Wonder if you might talk a bit about that?

Thunman: ... Well interestingly, my first interest in special operations came in the Volador; we made a special operation while we were deployed. By special operations, I think as you and I have discussed earlier, it's not the same thing as special operations today. These are operations conducted in international waters in the vicinity of Soviet Ports or other ports of interest to the United States. Recognize there was no satellite intelligence at the time our submarines conducted surveillance, reconnaissance and intelligence operations right in the midst of their operations at sea. Observing operations such as missile firings or ASW [Anti-submarine warfare] operations. We were close. We were nose-to-nose to them in those operations. All highly classified, still highly classified, although you

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<sup>3</sup> SSN – Submersible Ship Nuclear. SSNs were nuclear attack submarines.

can read about them in some of the published books today. There was one operation that was cleared by the Navy for publicity purposes. One of our attack submarines trailed a Soviet SSBN [Submersible Ship Ballistic Missile Nuclear] in the Atlantic for a couple of weeks. This operation, I think, is portrayed in the Smithsonian Institute Cold War Section. I conducted similar operations as executive officer [of] Snook and as CO commanding officer of] Plunger in the Pacific. In Snook, we were ordered by COMSUBPAC, Rear Admiral Fluckey of World War II fame, to conduct surveillance of the Sea of Okhotsk along with surveillance off Vladivostok in the Sea of Japan. No US Navy ship had been in the Sea of Okhotsk since World War II. We had no good charts accurately indicating the depths of the water. We found we were in about 150 feet of water most of the time. We had to be careful. We were the first SSN [US Navy hull classification where SS denote a submarine and N denotes nuclear power] to have a special signal intelligence interception system on board. The system was called, "Waterboy" and it was specially installed by a shipyard before the operation. We used this system to map electronic signals existing in the Sea of Okhotsk and Sea of Japan. It was a very capable electronic system able to monitor the environment in every signal band. Our operation was so successful that the Captain, Jim Watkins later the CNO, was called back to Washington to brief Secretary of Defense McNamara. So the story goes, McNamara and Watkins crawled on the floor of McNamara's office looking at the large chart we had prepared showing Soviet areas of electronic operations. Watkin's outstanding briefing caused McNamara to authorize a new class of submarine containing the "Waterboy" system, the Sturgeon 637 Class. A total of thirty-seven submarines in the class. Snook was awarded the Navy Unit Commendation for our performance and I received the Navy Commendation Medal. It was my first decoration. I was very proud of it. Up to this time in my career, I had spent a lot of time at sea. I had conducted three Western Pacific deployments in my destroyer, one Pacific deployment in the diesel submarine [USS] Volador, two SSBN [ IN US Navy hull classification, SS denotes submarine, B denotes ballistic missile and N denotes nuclear powered] patrols and two Pacific deployments in Snook. I was a WestPac [Western Pacific] sailor.

Wass: Just to illustrate that things don't always go right when you are on a patrol and in areas that are dangerous to be in. I understand you had a toxic gas casualty on one of these special operations.

Thunman: ... Yeah, this was quite a story. In a submarine, you reduce carbon dioxide, carbon monoxide, and hydrogen using a special piece of equipment called a burner in those days. I don't know what they call it today. The burner had a bed of material, a catalyst, that if you passed the air over it, it would absorb these things and you are able to maintain the atmosphere within proper specification. I was the Snook executive officer [XO] and I had been prodding the engineer to change the catalyst, it was named Hopcalite. The engineer said to me one night,

"Well, XO you'll be happy to know. We finally changed the Hopcalite." About twenty minutes later, the word came forward, "Fire in the auxiliary machinery Space!" The casualty procedure was for the captain to go to the conn [control area], the XO to the scene, and the engineer to the maneuvering room. I took off for the scene, and as I entered the machinery space the watch stander there looked at me and dropped to his knees. I looked at another crewman who was up from the lower level, and he slid back down the handrails. I went into maneuvering room, grabbed the MC mic, and passed the word, "Toxic gas". I didn't know what it was, but it had to do something be like that because the atmosphere was [contaminated]. That started quite a chain of events. We went to periscope depth where we could ventilate through the snorkel mast, but the mast was leaking. People were down all over the boat. The captain ordered all hands to don emergency airline breathing masks. Some of the crewmen couldn't get their masks on fast enough and they went down. The engineer and several other officers began to pass out. At one time I thought at least half the crew had been seriously affected by the gas. Fortunately, some of the crew determined how to override the airline breathing mask regulators with a pencil to use them to pump air into those who were down. I believe that technique saved the lives of many men. I finally was able to make an inspection of the machinery spaces and found the burner to be red hot. It had a charcoal fire burning in it emitting CO and CO2 gases into the ventilation system. The manufacturer had erroneously put charcoal in the Hopcalite containers! We isolated and cooled the burner. We finally brought everyone around, but we had terrible headaches and swollen tongues. Our skipper at that time was Bill Yates. He did a wonderful job controlling the ship and crew during the casualty. We made a detailed report of it, but nothing every happened to the manufacturer of the Hopcalite who had made the terrible mistake. I always wondered why there wasn't an official investigation of the company. It was a near thing. We could have easily lost that ship.

Wass: So after the Snook, you were sent to the Bureau of Naval Personnel in Washington for two years. I think there you instituted quite a few policies and also were a referee between two Admirals.

Thunman: ... I had no idea why I was ordered to the Bureau of Navy Personnel. I was a young lieutenant Commander, expecting to stay at sea. I went to see my boss at the time, a great submariner, Captain Lando Zech. He had been my company officer at the Naval Academy. And I asked what my job was and, he said, "Your job is to keep Vice Admiral Rickover and Vice Admiral Semmes, Chief of BUPERS [Bureau of Naval Personnel] from killing each other." There has been terrible fighting between BUPERS and Vice Admiral Rickover's office on the policies for qualification, training, and selection of personnel in the nuclear power program. Captain Zech was the submarine detailer responsible for assignment of submarine officers. He was also given the job as program manager for nuclear

power and provided a billet for an assistant. I was in that billet. The unusual thing about the job, and Rickover had set it up, was that I had the opportunity to go anywhere in the Navy to set nuclear power personnel policy. That meant that I could go to DoD [Department of Defense], SUBLANT [Submarine Force Atlantic], SUBPAC [Submarine Force Pacific], SECNAV [Secretary of the Navy Offices] and any Washington office involved with nuclear power personnel. As a young lieutenant commander, I found I was working for senior officers, mainly captains, asking them to implement policies they didn't like. They would tell me no, and I would have to go to Rickover for help. CDR [Commander] Don Hall, "sweet ole Don Hall," worked for Rickover and assisted me. Hall was later a RADM. Hall would tell Rickover that someone wouldn't do what he wanted, and Rickover would call Semmes and raise hell. Then I'd be called in front of Semmes. He'd say, "Why can't we get these people together? What am I having this problem?" And then Semmes decided to ask Rickover to meet at BUPERS and talk with the people who were opposing him. Rickover was pleased to do it, and a meeting was set. So came the day. This is a true story, it's funny. Semmes had nine of his captains lined up against the wall in his office, and I met Rickover as he came into BUPERS. He had one assistant with him. We walked into Semmes office; Rickover, typical Rickover, he looked over and saw two plaques on the wall. One of them stated the mission of the Naval Academy and the other the mission of the Naval Academy Alumni Association. Rickover was never respectful of the Naval Academy. He never felt that the school was tough enough. But anyway, he looked and saw the plaque about the Alumni Association, and he said, "Well Admiral Semmes, can I have that?" Gentlemanly, Admiral Semmes said, "Why of course you can have it." Rickover turned to this assistant and said, "Take that with us." And the assistant rips it off the wall. [Laughter] and that started the meeting off with the captains watching all of that. We sat down and Semmes said some nice things, and Rickover started to talk about all the problems he has in the nuclear power program. About that time a yeoman came in and said, "Admiral Rickover, there's a phone call for you." Rickover said, "Okay." Semmes said, "You can take it in here in you want or you can go out." "I'll take it in here." said Admiral Rickover. He got on the phone and listened for a minute and started, "Goddamm it! You tell those people if they don't do this and do this now, I'm going to the Secretary of the Navy! They don't understand how important it is. They don't understand the problems we would have if they don't get this done!" He went into a real tirade at the top of his voice. Bam, he slammed down the phone and then turned back, and calmly said, "Well no. Admiral Semmes, do you want to talk further about the problems we're having?" The captains just stood there with their eyes bugged out. Semmes turned to then and said, "Let me ask the people in here to talk about the specifics of what they are objecting to." Not one of them said a word. [Laughter]. I don't know who was one the other end of that telephone, but it was the greatest trick, if it was a trick, that I've ever seen. During my time in BUPERS, I saw the incredible growth of the submarine force. The Navy was commissioning about one SSBN a

month. My job was to select the nuclear enlisted personnel for each of the new ships. I'd fight the commanding officers because they never thought the crews were good enough. Of course, we had to bring large numbers of officers from the Naval Academy and the NROTC [Naval Reserve Officer Training Corps] program. I travelled to about sixty NROTC universities and lectured the midshipmen on nuclear power and why they should come into the nuclear power program. I could talk the rest of the day about this assignment. It was so interesting, and it really gave me the opportunity to see how Washington works. One other interesting item was that Rickover assigned one of his lieutenants, Milt Shaw, to the Atomic Energy Commission, to run the commercial nuclear reactors program. Milt Shaw was a big, tough looking guy who worked for Rickover for years. Rickover was trying to help the AEC establish standards that the Navy's program and implemented to ensure safety.

Wass: And that's the Atomic Energy Commission....

Thunman: Yes.

Wass: The predecessor to the Department of Energy?

Thunman: Yes. They had a number of projects, commercial nuclear power, being the most important, at that point. They wanted to make certain that they put together the same standards as Rickover. Because Rickover, of course, had this wonderful reputation in the Congress for what he did and what he was doing and how he managed his program. So, he sent Milt Shaw over to help them, to be their Director of Division of Commercial Reactors, so to speak. He was there for about three or four months and they fired him and threw him back to Rickover. Said, "We can't use this guy. He's too hard. The things he wants to do are ridiculous. This check, double check standard, written procedure, a hundred percent following of procedures." So Rickover blew his stack, I was called over there along with Don Hall. He said, "I want to divorce ourselves from the Commercial Reactors Program. Now, I want any books that talk to nuclear power in the Navy, if they also talk to the commercial program, I want them separated. Now, they are going to have an accident!" I remember that. "They're going to have an accident!" ... This was about ten years before Three Mile Island. I had to go back; we had all these books about Navy enlisted qualifications that included the commercial qualifications. We had to immediately throw them away and just talk about reactors in the Navy. People were all upset that we had to do that. Now to me, it foretold the future and he tried to set up standards that probably would have prevented Three Mile Island, had Milt Shaw been put in as the Director of the Commercial Nuclear Power Program.

Wass: I think it is little known to the general public, but in the early 1950's when Admiral Rickover was just setting up the reactor for the Nautilus, he took the

Atomic Energy Commission Radiation standards and divided them by ten. And that became the limits for the Navy Nuclear Reactors Program. He was always very conscious wasn't he of protecting Sailors on board a submarine?

Thunman: Yes. He really was. I learned that in Nuclear Power School when we were developing the program that was taught to the enlisted. I remember in those interviews, he was always....so concerned about teaching enough about protection. Are we teaching enough about shielding? I thought, "Gee, aren't we spending a lot of time on this stuff?" Of course we did, because he wanted to. He was always concerned about it. I know he said at some point, I can't remember when he said, "One day, somebody's going to come at us and say, 'That we caused a problem.' So as long as our limits are well below the recommended standards, we will be able to sustain ourselves."

Wass: So at this point, Admiral, you got orders to the Prospective Commanding [Officer] School or PCO School and order to the nation's newest nuclear submarine, the USS Queenfish. Can you talk about what happened, from that point?

Thunman: You know I was really pleased, I thought, "My gosh, I was really going to the plum assignment in the Navy." I was in Rickover's Offices and we were going through the PCO School. He required every commanding officer to spend three months there. I got called by the detailer saying my orders had been changed. I was going to command the USS Plunger. The ship had just failed its Operational Reactor Safeguards Examination. It was the first ship in the Pacific Fleet that failed that examination. I had to get there immediately, if Rickover would let me go now. So, of course it was a great change. It was something that I was going to do and that's the way it was. They made me take the PCO examination early and I passed it and they sent me in to see Admiral Rickover. It was quite an interesting exchange with the Admiral. He asked me if I knew how the sister ship of Plunger had been lost. The sister ship was Thresher, the ship that I had always wanted to go to. Of course it was lost in '63. He said, "Did I know the details of how the ship was lost?" I said, "I knew the ship had decided to do its deep dive, its test dive down to 1300 feet, and decided to directly go down to that depth and test out all of its systems. It did not go down incrementally, 100-foot levels which was the standard practice." He said, "Yeah, they were cowboys." He said, "And you're probably a cowboy, too." He said, "I'd probably go and screw up the Plunger, which was a mess." He said, "If I were you, I wouldn't even go to it. I'd turn it down." I told him, "Admiral, I've always wanted to command a submarine." He said, "Well, you'll screw it up! Get out!" I came out and off I headed the next day to Pearl Harbor to take command of the ship. I went aboard and the crew's morale was terrible. The poor captain was a beaten man. The ship had just come out of a repair availability; they had all kinds of material problems. The shame of failing the exam was known by everyone. The first thing



I did was, I said, "Okay, get rid of all the telephones. Keep one in my room and that's it. And shut the hatches." I interviewed each man on the submarine for twenty or thirty minutes. Of course, I was kind of an expert in enlisted records. I had been there in the bureau picking crews of submarines and all. As I went through the whole thing and I found I had a damn good crew. There wasn't anything wrong with the crew. If you looked into what had gone on with the submarine, COMSUBPAC at that time was upset that these ships had to spend nine months in a restricted availability. It wasn't long enough, and they had too many problems and the skipper tried to do it rather than standing up and saying, "Wait a minute, we can't get through this. We need to do more than this." The inspection party came aboard and failed them. So, it was too bad, there we were, and we went through a very rigorous training and refit program for the next month or two. Finally I said, "Okay, I think we are ready to go critical. To take the reactor plant critical." We'd done enough and I went to my division commander and said we were ready to do this. We have to get permission from Admiral Rickover to do it and he said, "Okay." He took it up to COMSUBPAC, who was Admiral Walt Small. You and I had talked about relationships with him earlier and he not liking the nukes very much. So one Sunday afternoon, I'm down in the boat and the DIVCOM [division commander] calls me, "You've got to come up to Admiral Small's home, immediately." So I went up there, there was Admiral Small with his family sitting, looking enraged. He had a message next to him. It was a message from COMSUBPAC to the AEC [Atomic Energy Commission], to Rickover requesting permission to take the reactor critical. Rickover said, "I'm not going to approve that unless Thunman initials it." [Laughter] I'm up there, standing straight as a board and, he said, "Sign that!!!" I initialed it and out I went. It was funny. We passed the re-exam and off we went to the western Pacific. We had problems, material problems. Some of them pretty exciting. Our steering system failed; we had a valve blow apart in the steering system. We were in International waters, but fairly close to Soviet waters, were unable to steer and we had to overcome that. It was exciting, but we had a great ship. We won the Arliegh Burke Fleet Trophy, which was a trophy given each year to the ship that was the most improved in the Pacific Fleet. That was quite an honor, the crew, they won it and we did well in our special operations, in our Intelligence, surveillance and reconnaissance as I've talked about before.

Wass: And you made three deployments to WESTPAC conducting Special Operations?

Thunman: [... Yes we made three long deployments to the western Pacific. We conducted five special operations. We were awarded the Navy Unit Commendation for the conduct of operations of, "great value to the United States." My superiors said in my fitness reports that USS Plunger was the best submarine in the Pacific Fleet. I was very proud of my ship and crew. There was one funny happening concerning the crew wearing beards. I would not permit beards because of my experience

with the toxic gas casualty that we previously discussed. During that casualty, one of the chief petty officers had a beard and passed out because he couldn't get a seal on his oxygen breathing apparatus. That happened when I send him to locate the source of the casualty. It was a critical time. So I said, "I'll never serve on a submarine again with a guy who had a beard." When I commanded Plunger, the Chief of naval Operations, Admiral Zumwalt, came to Pearl Harbor. He had eased all of the policies concerning personal appearance in the fleet. Beards were okay and longer haircuts were okay. He talked to all of the sailors in the auditorium at the submarine base during one of his rap sessions that he was famous for. One of the sailors, he wasn't one of mine, asked him, "Is it okay for submariners to have beards?" Zumwalt said, "Why, of course." Well then the sailors said, "Not on all submarines. There's one submarine here that won't let you have a beard." So the name of my submarine Plunger came out. That afternoon I'm called up to COMSUBPAC's headquarters. Admiral Lacey was behind his desk. He said, "Ron, I understand you won't let any of your people wear beards on your submarine. Why is that?" So I went through the terrible toxic gas casualty I had experienced. When I was finished, Lacey looked at Zumwalt and he didn't say anything, and I left. [Laughter] We continued to be the only submarine that didn't allow beards. [Laughter] Later when I was vice admiral in the Pentagon I led the charge to eliminate beards in the Navy.

Wass: You made your point. So after your very very successful tour, where you were awarded the Legion of Merit with Gold star for your leadership on the Plunger, which the star is awarded in lieu of the second award of the medal itself. You were then assigned to two staff tours?

Thunman: Yes, was first assigned to COMSUBPAC's staff.

Wass: Then to CINCPAC [Commander in Chief, Pacific Command] fleet's staff.

Thunman: Yes, to be the head of the Operational Reactor Safeguards Examining Team. Which really surprised me; because I wasn't that experienced as what we call a 'nuke' I had never been a chief engineer.

Wass: And had never passed the Chief Engineers Exam? [Laughter]

Thunman: Never passed the exam. But it was an interesting assignment, because you reported directly to the fleet commander, nothing in between, and you also reported directly to Admiral Rickover. Whatever you did you reported to both of them. A lot of contact with Admiral Rickover. Early on I remember Admiral Rickover tried to get me to change, only happened once, change an examination. He thought I should have failed the ship, and I didn't. I'd given it a six-month moratorium kind of thing. I remember he asked me, "Don't you think you should have failed them?" I said, "No, Sir." I often wonder what would have happened if

I had said yes. I think he'd have thrown me out. 'Cause, he was always, it was important to him that you stuck to your grounds if you believed in them. ... Of course we were examining all of the nuclear-powered ships in the Pacific Fleet: the carrier, the cruisers, the DDGs [Destroyer Designated Guarded], and of course, the submarines. I had six members of the board, all experts. So, I really didn't need to be an expert, the other five guys made up for me. What I had to do with them was to hold them down. I think that's maybe why I got the job. I wasn't told that, but they realized that I was more personnel oriented than most and I would say to the other inspectors, "Wait a minute, you guys are getting better at this, but those are the same lieutenant junior grades this year as they will be next year. I mean they turn over, so you can't change what we're doing here. Do what's important but keep it the same." Rickover came out and I escorted him up to the fleet commander. It's funny; I told the people in the fleet commander's headquarters, I said, "Look, don't have anybody there to meet him. And keep the office empty. I'll take him into the admiral's office. Because Rickover does not like to see people sitting around." Well, the word didn't get out. They had a wonderful master chief petty officer where the cars parked who'd open the door for you. And we came and there he was, the chief. He opened the door; Rickover got out and started chewing this chief out, "What the hell are you doing this for? Don't you have a job? I mean is this the most important thing you do is open doors of cars. Look at you, a chief petty officer!" I mean this poor guy was about to fall down. So I said, "Admiral, we have to go in." ... Got him away from him... This was toward the end of the Vietnam War; the surface ships, the conventional ships were not in good shape... They had been operated pretty hard and they didn't really have a good engineering maintenance program... So, what Rickover and the fleet admirals agreed to was they would set up an inspection board and program for the fleet for all ships in the fleet, not just the Nuclear Propulsion Examining Board. That board would stay, but a whole new board would go on conventional ships and was going to be our job to train them. Which we did, it was hard to do because we had a pretty heavy schedule. But, I look back at that as, there's Rickover's move out of the Nuclear Power Program into the whole Navy, to change the standards of the Navy. That was his move to do that, it was something that I think he had in his mind all along. I'm going to make this a better US Navy, not just a better US Submarine Force. We.....

Wass: So I...

Thunman: Go ahead.

Wass: No go ahead and finish, Admiral.

Thunman: ... Well I, left there and went on to be the commander, Submarine Squadron 15 in Guam, commander of Polaris submarines.

Wass: Which I was a member on the missile submarine I served on and the Proteus was the tender there when I was there and also I believe you served as [commander of] SUBRON 15 [Submarine Squadron 15]. And you went through quite a few nontypical experiences I wished you'd share with the audience.

Thunman: Well...there was always a Soviet, what we call an AGI [Auxiliary General] Intelligence Ship -operating off Guam. He sat right at three miles. Our SSBNs would fire exercise torpedoes, but always inside three miles so the Soviets couldn't pick up the torpedo. Well one day, the exercise torpedo that was fired got outside the three miles. The AGI immediately moved, picked up the torpedo and headed north I'm sure to Russia somewhere. I got the word and I went immediately told my boss. The first thing I told the SSBN was to surface and follow that AGI. It's kind of a ridiculous thing, this big ballistic missile submarine chasing this little auxiliary, AGI, in the ocean... And I said, "Don't you lose contact, they must maintain contact." Then I made a complete report to the chain of command. There was a big scramble in Washington, I guess a threat was made that they were going to get a battle group underway in Japan to intercept that AGI. I mean it was, there were big people involved with what they were going to do about it. Finally, I guess the ambassador working with the Soviets in some way, they got the agreement that the Soviets would turn over the torpedo. So I sent our torpedo retriever out to conduct the exchange. Roger Bacon, later Vice-Admiral Bacon who was skipper of the tender at the time, he was on the retriever. We had put Marines with weapons in the compartment of the retriever, because we didn't know what to expect out there. But I told Roger I said, "You keep that [compartment] hatch locked till you had to unlock it. In case something happened." But they got...next to the AGI, we put swimmers in the water, and they put swimmers into the water, and they swam the torpedo over to us. We took it and they gave us a bottle of vodka with it and a note saying, "Detente is detente." So it was okay, but it was an international incident. Another problem was a German tug was towing a salvaged merchant ship. It was a liner and he lost his tow and the liner ended up smashing into the rocks off the Guam, closing part of the channel. We had a helluva time keeping the harbor open, 'cause we had to get those ballistic missile submarines to sea, and I was battling with everybody about getting.... initially I said, "Let's just blow it up." The system calmed me down and we were able to make a pathway through there with the Coast Guard and keep the ships at sea. ... The final incident, of course, was about 25,000 Vietnamese Refugees came to Guam. Many of them coming by aircraft, by 747s and some by a couple of ships that came.

Wass: And this was in 1975 when Vietnam fell?

Thunman: Yes, when Vietnam fell. It was quite an experience. Some of the people really hadn't wanted to come but somehow had been forced to come on the ships. We

had to put them in special compounds and send them back. Many people were very wealthy; they were dragging bags full of gold Bot, what was gold currency in Vietnam? They were asking us to take care of it. I said, "No we didn't have enough people." The [submarine] tender did a wonderful job. I was the one who had the most men on the island. The admiral there asked me if I would help them and I said, "Of course I would." So we developed fifty-man teams and we put different skills in them, and we used them to build these tents, thirty-man tents for the people. We had people in buses coming up there. It was quite an operation and the tender, the skipper of the tender did a wonderful job of it, Nubs Greer was his name. We had one funny incident. We had a Greek ship came into Guam during that time. He was having some engineering problems. He had a ship full of rice that he was carrying to Taiwan. I asked the admiral, "Is there any way that we can get that rice?" He checked with CINCPAC [Commander in Chief Pacific] and there was politics and finally the admiral said, "Go ahead and get the rice. Take it." I had a Marine company because I had nuclear weapons, so I always had Marines there. So I packed them into trucks and down I went to see the skipper of this Greek cargo ship. Went to the gang plank with him and into his office. He pulled out a bottle of Ouzo [Greek brandy], each of us had a little Ouzo and he said, "What are you here for?" I said, "I have a really good deal." The admiral had authorized that we would pay twice the price that they were expected to get in Taiwan. So I told him. You could see, he said, "Well you know, there's a lot more to it that goes into this. We may have to consider an increased price." I said, "I don't think we have to. If you look out your porthole there, the Marines are off loading it now!" [Laughter] We got the rice!

Wass: Good story. And you were also, I think, during that tour a task force commander on successful exercise missile firings?

Thunman: I was, we went to sea with two ballistic missile submarines, and we had two destroyer escorts, and an oiler. We went to sea and fired six missiles, exercise missiles, all in a very realistic scenario where the war message came. They didn't know when it was going to come; it came in the middle of the night. All six were successful launches within fifteen minutes. Within the advertised time that we had in the program. Within what we call the "pickle barrel", which was well within a mile of the target. I can't tell you what the actual distance was, very very very accurate. It was a highly successful operation. The Soviet AGI followed us and I think finally saw it from a distance. We had zigged and zagged a few times to get out of his vision, but I think he saw it. Frankly, I think it was good that he saw it, saw that this system works exactly as is...was designed. Those were.....old at that time those were older fleet ballistic missile submarines. Those were the ten oldest, they were part of the 41 for Freedom that came about in 1960-61. A great demonstration of a great system.

Wass: So Admiral, you had later, you were named Rear-Admiral and COMSUBPAC, but prior to that you were then sent back to Washington, D. C. for three years at the Bureau of Personnel and if could you talk a bit about that and then we can take a break.

Thunman: Sure. I was sent back as the assistant chief for officer development and distribution. Primary responsible was to distribute officers in the Navy. Quite an assignment, interesting assignment, all Officers from all communities. Seems to me I spent half my time arguing with senior officers in the Navy about the people they were getting. Everybody said they wanted better people. It was interesting, reactions on the part of senior people about who was good and who was bad. Maintained my relationship with Rickover at the time. One of the funny things that occurred with Admiral Rickover. He was now married to Mrs. Rickover, who had been a nurse. Wonderful lady and still is. A new rear admiral nurse corps officer was assigned, and she came into the job and she decided she was going to change the [US Army] Nurse Corps. She was going to relieve half of the different senior nurses that they had around the country. This came to Mrs. Rickover's attention who was still very interested in the Nurse Corps, although she wasn't on active duty. She had told the admiral, I get a call Saturday morning, he was furious about it. He said, "What are you going to do about it?" I said, "Well, we'll fix it." He said, "Well, I wanna be there." and I'm sure his wife had said he would. So, I call Admiral Arenzon was his name. Tough, he was Chief of the Bureau of Medicine and Surgery. Said, "We are going to have a meeting this morning, Admiral, with Admiral Rickover to talk over the nurse assignments that you all are contemplating." So there I had Rickover and Arenzon and this brand-new nurse flag officer and she said these are the things that she wanted to do. Rickover looked at me and I said, "Well, we can't do that." and Arenzon said, "Why not?" and I said, "We don't have the money to do it." I said, "Every time you move somebody in the Navy, it costs money." I said, "We don't have the money to do that. Maybe a year from now you can move the head of this one to here or to there, if it's time for that person to be relieved, but this is it." Rickover just beamed, so the meeting ended, this was funny. Rickover stood up and the nurse was there, and he looked at her and he says, "Well, I hope you're satisfied, now." and he walked over and kissed her on the cheek. [Laughter]. I about fell down when he did that! The Chief of Naval Personnel was Vice Admiral Watkins. As I said I worked for him several times... He was my mentor.

Wass: You were rear admiral at this time?

Thunman: Yes, I was rear admiral...

Wass: The youngest rear admiral in the Navy at the time...

Thunman: Yes. We took the assignment part of the Bureau and moved it to Memphis and kept the policy in Washington and became a part of what is called the OPNAV [Office of the Chief of Naval Operations] or the Pentagon organization. I was there two years; I was called in by then Admiral Baldwin who had relieved Watkins. He said, "I've got good news for ya and some bad news." He said, "You're going to be assigned as COMSUBPAC when you finish this assignment if you do it well." I said, "That's wonderful. Thank you very much, Sir." He said, "But the bad news is that you're going to put together the policy to put women in the Navy at sea on ships." I remember saying to him in a dumb like manner, "Why me, Admiral?" and he said, "Why not you?" [Laughter] Not a good question. So, I went back to the office and I said, "Bring me all the women commander service records that we got in the Navy." I spent the weekend reading these records, because I knew I was going to have to bring some women in who are respected, but who are also not on the side of feminism but on the side of the Navy. I picked out two women, two commanders, one of them, both of them ended up in the Navy as Vice-Admirals. One of them, Pat Tracey, who went on to become the Chief of Naval Education and Training in her career. I can't remember the other one, I should but I can't remember her. But I had these two young commanders ordered back and I sat with them and we put together the policies. The main policy was okay, we are gonna put women on ships, but first we are going to ensure that we had the proper accommodations. At that time, the secretary of the Navy... ("Anchors Aweigh" – march song of US Navy, plays in the background as the Admiral's cell phone goes off) Excuse me.

Wass: Fitting song!

Thunman: We had several women in the Administration; it was the Carter Administration that wanted to do it immediately. You know, tonight! And I said, "No, we must have the correct accommodations. We've got to do everything that you would normally do. We've got to put in the right heads, and mirrors, and hair blowers, and everything. Separate the compartments and do all those things and we'll do them as fast as possibly we can, but we're not going to do anything till we have that. Initially, we were going to put women on auxiliary ships, then we would look at into combatant ships. Frankly, I did it that way because I would be gone by the time the combatant ships got around to it. But it was the right thing to do. Let's start with ships that had the right accommodations... One of the things that they came up, they said, "What about submarines?" I said, "No, you know..." They said, "What if we needed to put women on a submarine in an emergency to do some sort of special maintenance or engineering work?" and I said, "I said, no our policy should be that no woman should be on a submarine overnight? If there was some reason, they had to helicopter her out to fix something, okay, but the policy should be that they shouldn't be there overnight." They didn't like that solution. There were two women, the assistant secretary of the Navy and assistant secretary of Defense. So I invited them to go sea on a submarine to see

what it was like on an attack submarine, I didn't pick a ballistic submarine. They were delighted to do that. I called Vice-Admiral Ken Carr, who was Commander Submarine Force Atlantic and told him. I said, "You know, it seems to me you would wanna train the people as you normally do at sea and they'd see this training. Like a major steam leak, which of course meant that you shut down all ventilation and air-conditioning in the ship and it's kind of, you're not too happy while the training is going on." So they went to Norfolk, the next day and when they came back, I went over to see the lady in the assistant Secretary of Defense office and she said, "Submarines are no place for women!" That was her comment. I said, "Well, I agree with you." and that ended it at that point. Now subsequently when I was Deputy CNO for submarines, we got sued by a shipyard worker, woman shipyard worker, who wanted to go on sea trials, and she won the lawsuit. The other interesting thing at that time was we emphasized the importance of retention, and we had to turn that problem around, and we did. Certainly, when Admiral Watkins was there, officer and enlisted retention was improved.

Starts section 2, including section one.

Starts at 0:00:48

Wass: Admiral, we're back recording, but before we move onto your tour as Commander Submarine Force Pacific, there are a couple of questions I'd like to ask you about your staff. The one is...the first question is about you being at BUPERS and following Admiral Rickover's suggestion or orders to start training admirals and captains in high levels throughout the Navy in nuclear power technology and engineering. Can you talk a bit about that?

Thunman: Well, yes. Actually, Admiral Rickover working with Admiral Holloway who was in the Chief of Naval Operations, put together a program and also with Jim Watkins, to who was the Chief of Naval Personnel. Put together a program to train and educate senior officers, admirals, captains, commanders, train them in maintenance of engineering plants and the training of engineer plant personnel, essentially, bringing them into a prospective commanding officer course environment where they would learn the basics of engineering and of course, we're talking about surface ship engineering. It had nothing to do with nuclear power submarines. It was interesting to do it, because, first, nobody liked to do it. They all had to go out to Idaho; this is where the school was conducted and spend three months out there, living in a barracks studying engineering. These were, of course, senior and older officers and many of them thought they didn't need it. ... Well, they did need it. The surface Navy's ships were not in good shape –were in bad shape, in some cases, not in good shape, in others. This was a way for Holloway to attack it and it was a way for Rickover to bring another element of his program into the entire Navy. Earlier I'd talked about how he had done it by bringing his inspection program into the [surface] Navy. And now this



was bringing in training and education of the senior officers. Today, the programs are conducted in Newport News, wrong, in Newport, Rhode Island. As I understand, it's going strong and it's been very, very helpful to improving the engineering professionalism of the surface Navy. The only funny part of it was that some of them that I would call and say, "You've got to go." and they'd say, "Absolutely, not!" Of course my response was, "If you don't want to argue with me about it, you can argue with Admiral Holloway, the CNO." People got pretty quiet after that. [Laughter]

Wass: So you have been given some tough jobs along the route in your naval career. Admiral Rickover is always been a legend on his visits and rides on nuclear submarine. I understand you went to sea with him on the USS Drum, the fast attack nuclear submarine....

Thunman: Yes.

Wass: I wonder if you might talk about that and perhaps, the preparation that all submarines had to go through before Admiral Rickover came on board because there were certain items that he liked to have at his disposal upon arrival.

Thunman: Well yes, of course, you know we'd call it 'Rig for Rickover'. But I was a young captain, that's right after I finished Command of a Submarine. I was a young captain on the staff of COMSUBPAC and I got called in by the admiral one day and said, "You're going to sea with Admiral Rickover on the new construction sea trials of the USS Drum." And, you know, I thought, "Why me? I was a pretty young guy and that was a big political situation. Me, going back, going out and dealing directly with Rickover for two days about Submarine Force specific matters." Of course, I did it. It was pretty funny, when we started to get underway -- we were in Mare Island. The Carquinez Straits coming out of Mare Island were flooded with fog. So, Rickover came -- 6 o'clock in the morning, I'm standing there, I had the pilot for the tug who was going to accompany us. And the pilot said, "Well, I'm not going to go in this weather." Rickover came and I said, "Well Admiral, we can't go because the weather's too bad." He said, "Well wait but that's ridiculous, it looks okay to me.", or words to that effect and I said, "Admiral, we can't go." He said, "Well, you're responsible." Of course, that was always a big deal with Rickover. When you were responsible, make sure you were. So he went down in the ship and I was concerned, and I was calling ahead to the different bridge stations, finding out what the fog was at each station and finally it started to lift. I went down and got the Admiral and said, "We're ready to go." Now, the crew had never taken the ship to sea before, they had practiced navigating, you know, with the ship alongside pretending what they would see, but it's not like doing it. I'd had a lot of experience around Mare Island and the Carquinez Straits. So I kind of took over the navigation on the periscope, because I could identify the smokestacks and other things that somebody who knew

about it, could use -- and a brand-new crew wouldn't use. So we made our way out and finally got out under the Golden Gate [Bridge] and Rickover was up on the bridge the entire time with the captain, of course. ... He came clumping down the ladder into the control room and I was standing there, and he said, "Well, I got us through of the straights!" [Laughter] I said, "Yes, Sir."

Wass: A wise thing to say. [Laughter]

Thunman: The other part of that was -- one of the things that Rickover was doing, and it turned into a bigger problem for him, was in the crash back operation that is going from all the head flank to the all the back emergency. That really tests out the propulsion plant and the train. He would keep the back bell on until the submarine would start to go backwards, gain sternway. Of course, submarines were not designed to operate with sternway, the nuclear attack submarines, anyway. There had been some difficulties, and this had been discussed at high levels and the word came down from COMSUBPAC when I was going out with him, "Don't let that ship gain any sternway!" and, "It's your responsibility to keep that from happening." In actuality, I was responsible for the ship, a new construction ship; the fleet commander's representative is the one responsible. So I thought about that and I rigged a communication from me to the operator of the steam throttle in maneuvering area in the after end of the ship. I was in the forward end, around the instrumentation where I could visual...I could monitor the head speeds and stern speed and I told them all beforehand, I said, "If I have to tell you all stop, shut the throttle, you'd better do it or I'll see that you are court martialed." Because Rickover thought it was kind of interesting to see what people would do if he started that [let the ship go backwards]. So sure enough, I was watching the speed come down, five knots, three knots, two knots, zero, then started to go negative with sternway. And I yelled in there, "Shut the throttle!" and they shut the throttle. So the Admiral came forward, and I thought, "Oh boy, I'm gonna get it!", and as he came by he looked at me and says, "Chicken!" [Laughter]

Wass: You passed the test. [Laughter]

Thunman: But the other part that you were talking about was, that I talked about earlier was, 'Rig for Rickover'. That was, we had to have khakis that fit him, a jacket, we had to have the ten last best novels on the, "New York Times" Book list. All ten of them there. We had to have peanuts and he had to have lemon drops and also if he brought anybody.... anybody with him, you had to have khakis that fit the person. You never were told who the person was. So I....but you...You worked to get the intelligence. I find out that John Fluke of the Fluke Meters, you've heard of Fluke Meters, was going to come aboard, as well. He was about 6'8". I personally went down to Sears said, "I've got to have khakis that'll fit someone who's 6'8". They got them and so the Old Man, when they came

aboard, and the equipment was being passed out. He said, "Did you got any clothes that'll fit Fluke?" I said, "Yes, Sir, we do." He said, "Oh good." [Laughter]

Wass: You passed again! [Laughter]

Thunman: Right!!

Wass: So Admiral, before you became COMSUBPAC, you were awarded your.....another Gold Star in lieu of a third Legion of Merit and then assumed command of the Submarine Force in the Pacific from April '79 for two years. That was a quite a few -- very notable things occurred during that period. Might you talk about it, please?

Thunman: Well, the most important thing at that time was that since the Vietnam War was over, the retention had not been good, and so we worked hard on improving the retention for the sailors. Setting up, planning better operations for the fleet ballistic missile submarines and so that they weren't so boring. Of course, you know the fleet ballistic missile submarine on patrol, generally, goes slow and you're away from everybody else and stands by to execute its mission. So what we did, we broke up the times underway, let them operate with other Navy ships and let them visit other ports. It was a good thing, I think it was well received, I was happy to hear that our interviewer here today had seen some of that and thought that it was a good idea. It's good to hear after all these years that it was well received. On one occasion though, one of the ballistic missile submarines was operating with a Navy patrol aircraft doing anti-submarine warfare types of operations. It was foggy, rainy and in the night. He was headed on his way to Korea for a port visit. He came to periscope depth and he felt a bump. He went down deeper and thought about it a minute and thought he had bumped into a fishing trawler. In that area of the ocean, they're full of trawlers. Pulled away, came up contacted the aircraft about he thought he had bumped a trawler. The aircraft examined the small fishermen that were out there and couldn't see any problem. Again, it was night, rainy, foggy, so the SSBN goes on his way. A couple hours later, sends a message saying that he had done this. Well, my...My feeling as COMSUBPAC was if you take an 8,000-ton ballistic missile submarine, then you bump it into anything, you've got a collision. So, I started to make sure that the fleet informed the Japanese ambassador that we may have had a collision with a small ship there in... near Korea and kind of stood by to see what would happen; the Japanese did send ships out to take a look at the area and they found survivors in the area. What had happened was the submarine had hit a small merchant ship, about a 5,000-ton merchant ship and sank it, almost immediately. Two people were killed, the captain and one other. Well, as you can imagine, the news media picked up on this, it was in the early days of CNN. We were trying to work our way out of it with them, trying to say that we were gonna investigate it and do the right thing by everybody

involved. Ah, because, you know most submariners will tell you that once, everyone in their lifetime as a submarine commanding officer has taken a submarine up to periscope depth where you're at a depth where another ship will hit you if there's one there or you'll hit it. All of us will tell you that we've all come close to doing that. It's almost by the Grace of God that more don't do that. It really kind of reflects on their professionalism. The commanding officer had had command for four years and Rickover called me during the big public affairs operation, that was going on. He said, "Well, I know you've got a problem out there." He said, "That commanding officer is a good man. He's been in command for four years. So, don't do anything rash." I said, "Well of course, we won't, but we will follow the standard policies of the Navy and we will investigate it because there was a collision." Then he said something, which I thought at the time was pretty funny, he said, "Well you know, in World War II, we had a submariner sink a Japanese hospital ship that was showing red lights as a hospital ship. He later on made admiral in the Navy." Then he paused, and he said, "But, then again I guess our relationship with Japan was a lot different than it is now." Well, it was the only light part of it. We did end up relieving the captain of command, not because he hit the merchant ship, but because he left the scene of the collision. He assumed things were okay and he shouldn't have assumed it. The law of the sea is you take care of someone in distress and be sure that you're able to take care of them and he was in a modified alert situation.

Wass: There were other events while you were COMSUBPAC, the new class submarine, Los Angeles, had been coming out and being built and I think you had to convince the Fleet Commander to use those submarines properly and they had never also been used to be part of a carrier battle group. You spearheaded both those initiatives. Can you talk about that?

Thunman: Yeah and there were two initiatives. The new Los Angeles [class] ship came out, wonderful ship; high speed in excess of thirty knots could keep up with a fast carrier task force. Initially, the fleet wanted to use them as escorts of carriers. Well, I felt that it was absolutely essential that they be used in the Intelligence, Surveillance, Reconnaissance Program. Which I always believed was not only a program of intelligence; it was a program of training of our people to operate against the Soviets. And I believe very strongly, and I believe it today that if we had gone to war with the Soviets in any way shape or form, we could have destroyed the Soviet fleet, in short order, because we demonstrated it almost every day, monitoring their fleet operations. We had the weapons to do it, and what was important we had the people on board our submarines who were confident they could do it. As I say they were around the Soviets, daily. They weren't afraid of them; they weren't worried that they were going to find something that was gonna effect their capability to deal with them. So, I had to...I had to convince the fleet commander to use the Los Angeles in that

capacity, but then again in a later part of my time there, we put together the procedures where they, when we had enough of submarines, they could be used to support the battle group. Now, I did have a Rickover problem, when the Los Angeles submarine got there, it had no ability to attach what we called a towed array, which is a sonar array; it's about 700 feet long which you use for detection in other submarines and it.....it....

Wass: Submarines that might be behind you and trailing you?

Thunman: Well, more than that. It's to find other submarines at long ranges. With this long array, it's able to receive very low frequency signals and you can get a long, extra-long ranges. I mean, really at the time, it became our primary detection vehicle in our submarines. Very important device. I found that you couldn't, of course, put the array on in port, because it was so long. We'd deployed a submarine to Guam, and they were trying to put the array on when it left Guam, but the weather was too bad, and they couldn't get the array it on. It was incredible. I said, "Why don't we have a retrievable array that you would build into the ballast tanks?", and the answer was, 'Well, Rickover doesn't like it. He says it would slow the ship down.'" And they had done some studies; it would slow the ship by one knot. Well in my view, it was much more important to have that detection capability, long range detection capability. So, I got in a plane and went back to Washington. Everybody said, "Don't do that, you're gonna get into trouble; this is a big deal to the Admiral." And it had been if you look into his history about how he worked so hard to get speed into that Los Angeles class. I went into see him, and I said to him, "Admiral, you know that submarine is no good without it. I mean if we want to detect their submarines at long ranges, we've got to have this array. So we need a retrievable array." And I waited for the blast, it didn't come. He said, "Okay, get Admiral Wilson in here," Rear Admiral Jim Wilson, "And let's get together and put together a towed array system and get it aboard the submarines as soon as possible.". Point that make I there is that you could deal with Admiral Rickover when you had a real reason to counter him. You had the ability to explain to him why you were doing it and he'd listen to you. Get him to listen to you and he would. I never had a problem with that. Of course, I never brought up very much that countered what he wanted. But it showed that he was certainly far-thinking enough to make changes as they were necessary in the tactical environment.

Wass: But you did so well as COMSUBPAC that Admiral Rickover told you are going to be the next superintendent of the Naval Academy.

Thunman: Yes he did, and interestingly, Bob Long did too, Admiral Long. But then Secretary of the Navy came out to visit us in the new administration, the Reagan Administration....

Wass: John Lehman.

Thunman: John Lehman came out. He didn't say anything about it, but after he went back to Washington, the commander of the Third Fleet, who was an aviator, much more senior guy than I, he was a three-star, a wonderful guy, was selected. The only thing that I could think of, I think it may have been true that they didn't want a nuclear submariner in the job, the new Administration. Maybe it was because I was too much like Admiral Rickover; I don't know, it maybe, my own personality. Any case it was a disappointment. But, at the same time, I was told that I would go back to Washington as the Assistant Chief of Naval Operations for Submarine Warfare, that I'd be promoted to three stars. And that was an incredible leap forward for me.

Wass: And you were only forty-nine years old at the time and based on your COMSUBPAC experience, I think you were awarded another Gold Star in lieu of your fourth Legion of Merit Award. So you were doing extraordinarily well in the Navy. Now you were assigned to the top submarine post in the Navy. We used to call it OP02, I think the other name was Deputy Chief of Naval Operations for Submarine Warfare and you were there in that post for almost four years...

Thunman: Almost five years... Longer than any previous incumbent.

Wass: Almost five years, excuse me, that's correct. And a lot transpired and a lot of initiatives on your part. Would you share those issues and initiatives, with us, please?

Thunman: Well, I worked for Jim Watkins, again. He was the Chief of Naval Operations, so I had a strong backing and Admiral Watkins had a lot of confidence in me in the path. When I came into the Pentagon, they were thinking about building one submarine a year. When I left the Pentagon, they were building five submarines a year and we were building also one Trident submarine a year. We received the approval to put the new attack submarine named USS Seawolf SSN21 to commence construction of that submarine system. And we had a new Trident missile. It was an incredible move forward in the Submarine Force, not necessarily due to me but it was because, I think, most everyone – they recognized that the most powerful force in the Navy was the Submarine Force in both conventional and nuclear wars. Our Trident submarines were the most important leg of the triad. And as I said before, attack submarines would destroy the Soviet Fleet and any other in a conventional war. We developed a new torpedo we took over the development of the Tomahawk Cruise Missile. It had been a joint program that had not been going very well and I volunteered for it because I thought the Tomahawk Cruise Missile married to the submarine would give us a land attack capability in a conventional war. We had land attack

capability in a nuclear war but not in a conventional war at that time. So, I pushed that as hard as I could. We got control of the program, as I said, it was a joint program, ran by the Department of Defense, and went forward with that. It took a lot of lumps because it wasn't going well. It had not been designed well. I mean the engine was under powered, the aviation capabilities were very poor. You wouldn't design an airplane like that but we brought it on the line, and at the same time, we changed the Los Angeles class attack submarines and put in vertical launching systems so that we could launch Tomahawk cruise missiles from our attack submarines. You could have launched them out of torpedo tubes but the numbers of weapons in the attack submarines was about twenty-five and if you want to half torpedoes, half Tomahawks, you cut yourself down. So we came up with a program, which we called DLS and all submarines, today, have it for launching cruise missiles from the submarine. Of course, you can use your torpedo tubes for torpedoes and attack missiles, cruise missiles. The Tomahawk was very successful, finally. I was retired when we opened up on Baghdad a few years later. I was listening to a newsman and he said, "Something just went by and turned right and went down the street and hit the Ministry of Defense." I said, "Tomahawk!". And of course, it's being used to great effect today.

Wass: Well, few people, I think, a few citizens realize that 75% of all Tomahawks launched in the recent wars such as Desert Storm have been from submerged submarines and that is an initiative that you developed.

Thunman: Yes... well, we had quite a program of people involved. It was not only just developing the missile, you had to develop a system to send command and control to the missile, to change it. If you wanted to attack certain targets you had to get everything into that. Back in those days, we didn't have the satellite control [of the missiles] as they do now. So we had a kind of a Rube Goldberg kind of guidance system. Digital Scene matching, which sounds complex, but what it did was take a digital scene and compared it to the scene that it was seeing and then matched them up. That's how it navigated. In order to get the Digital Scene, we had to have satellites up all around anyplace that we thought might be a target. We got the Digital Scene, to bring all that information back and we did – We brought it back to St. Louis and it's a huge drafting area facility. A thousand guys at desks, drafting, putting together the right Digital Scene for the targets. I went to visit them one day and I thought, "My God, what has God wrought here! Draftsmen all over the place." But we literally mapped all the targeted areas and, of course, that's now been improved. They don't need it, now with the satellite capability. So it was a major step forward. The other thing of which I am proud was the development of the new attack submarine, the Seawolf [SSN 21]. Our goal was the maximum fire power. So we went from four torpedo tubes to eight torpedo tubes. We put in capability to carry fifty weapons, doubled the weapons. It was the quietest submarine ever built. It still

is, I think...It was the fastest submarine by far that we ever created. To demonstrate how quiet it was two admirals had me go to sea here about five or six years ago. They were young commanders working for me, back in those days, and I was very proud of our establishment of the characteristics of the new attack submarine Seawolf, SSN 21. I headed a group of about ten submarine experts to establish these characteristics. We called it Group Tango. We examined all available technology for improvements of submarine warfare and then established the characteristics of Seawolf. We planned to build the fastest, quietest, and most heavily armed submarine in the world. It carries twice as many weapons and has twice as many torpedo tubes as the Los Angeles Class. It can launch torpedoes or cruise missiles from the tubes. It has a propulsor instead of a propeller and a new sonar called the Wide Aperture Array. We called Seawolf, "The Capital Ship of the 21<sup>st</sup> Century" I must've briefed at least half of Congress on Seawolf, separately or in groups, in order to get approval of the funding required. They strongly supported the new SSN. About ten years ago, I had the opportunity to ride one of the new Seawolf Class submarines, USS Connecticut. I received a call from two admirals, Ed Giambastani and Tom Fargo, who had worked for me as commanders when I was in the Pentagon. They had been very successful in their careers. Ed was Deputy Chairman of the Joint Chiefs of Staff and Tom was Commander in Chief US Pacific Fleet. They invited me to go to sea aboard [the USS] Connecticut. It was a very nice gesture on their part to arrange it. They said, "We'd like you to come and see what SSN 21 turned out to be." I have a pacemaker and my cardiologist was a little concerned because of the electromagnetic environment on board the ship but I went anyway. I was amazed at what I saw. For example, we had designed a torpedo ejection pump. Its complexity was almost like an eighth wonder of the world. You can shoot a torpedo, and nobody will hear it. In previous submarines torpedo firing was very noisy. So we were up in the torpedo room and I said to the captain, "I'd like to hear a torpedo firing, I'd like you to shoot a water slug." And I am standing there and we're talking, and I turn to the captain again and I said, "I sure would like to hear you shot that water slug." He said, "We've already fired two." [Laughter] I hadn't heard anything.

Wass: ... In my submarine you could hear torpedo firing in the maneuvering room at the end of the ship.

Thunman: You could hear them twenty miles away.

Wass: Twenty miles away, right, [Laughter]

Thunman: ... Then we went back to the maneuvering room in the engineering spaces and I said, "Crank her up to flank speed, let's see the emergency head bell." And they wound that baby up and you hardly heard anything. It was, it is an incredible



submarine! The Navy is now building the Virginia-class, which is kind of going back to the class we had before. It is certainly very capable and a good submarine. But in my view the most capable submarines that we built in that time were the SSN 21 Seawolf-class. I understand that today's combatant commanders feel the same.

Wass: And I think that's still true, I think it was an issue of cost with the Congress....

Thunman: Sure, yes...yes well that's true, it was an issue of cost in the short run, in the long run, I'm not so sure....

Wass: Well that's right, but the price of freedom is a stiff price so...

Thunman: ... Another thing happened that was interesting during my Pentagon tour. We found the sunken passenger liner Titanic. It was a funny story too. Bob Ballard, who is the one who, found it came to see me because I wanted him to go out and photograph the bottom where the [USS] Thresher and the [USS] Scorpion had gone down. Now we knew where Thresher was, we didn't know where Scorpion was. We thought we did, of course we didn't know where Titanic was, but the mission was to go out and photograph and take samples from the bottom of where Thresher went down. Then go out and find the Scorpion and take some samples and then photograph the bottom. Bob Ballard, a wonderful young scientist of Woods Hole Engineering, he said, "Ya know, all my life I wanted to find this Titanic." He said, "Could I as part of this operation have some time to look for the Titanic?", because he now had a lot of equipment that would help him do that. Great photographic equipment and sleds with this equipment on board that he could operate from a surface ship, tethered but he could bring them down to the bottom and survey the bottom. I told him initially, "No, this is a top-secret operation, if you find the Scorpion -- we think you will -- you will use or, what we call SOSUS [i.e.SOUND SURveillance System] - underwater detection capability. We did have a fix of where Scorpion was from the SOSUS recordings made when the Scorpion went down. We'd never gone and looked there, and it wasn't the greatest fix, but it was a pretty good location of it. My point was if we go find the Scorpion and the Soviets find that out, they will know that we've got something out like SOSUS out around the Atlantic and, the ability to detect submarines in the entire Atlantic Ocean....it was quite a capability.

Wass: And we had been tracking the Soviets for years without them knowing because of our SOSUS arrays.

Thunman: That's right. So, then he said, "Oh, you know Admiral, we'll keep whatever we do quiet and we can do it. Come on, let me do it?" Finally, I got tired of talking about it and I said, "Look, you're gonna do this job for this amount of money and time. If you want to look for the Titanic, go ahead. But you're not gonna get any

extra money or time." "Get out of here." [Laughter] Bob Ballard is a wonderful guy, but I didn't think he could find the Titanic. I did think that if the Soviets caught us looking for the Scorpion, we could use the Titanic story as a backup. It took about a year to get ready for the operation. Then Ballard visited the Thresher site and that went well. A year later he found the Scorpion. When we evaluated the photographs of the site, we found that Scorpion had not been sunk by torpedoes, some had said. She sank because of a catastrophic flooding in the forward end of the ship. We don't know what caused the flooding. I thought it was probably a battery explosion. One thing Ballard learned in searching for Thresher and Scorpion was that there was a trail of debris that led you to the sunken hull. Heavy pieces would sink faster and lighter pieces more slowly, leaving a trail because of the current. After Ballard finished at the Scorpion site, he had two weeks to find the Titanic. He used a technique of finding the trail and following it to the hull, and he found the Titanic! My aide said to me, "Bob Ballard is on the marine telephone and he wants to talk to you." I got on the phone and he said, "I found it!" It had been a year or so that this operation had been in progress and the number one thing on my mind was not the Titanic and I said, "You found what?" He said, "I can't tell you over this telephone, but we want you to meet us in Portsmouth to make an announcement of the finding to the press." After we hung up, I realized that we had found the Titanic. I ran to see Jim Watkins, Admiral Watkins CNO, and I said, "I've got good news for you! We found the Titanic!" He said, "That's great!" I said, "But I've got some bad news, we've never authorized this operation in any way, shape, or form. We've never funded it. We've never told the Intelligence subcommittees of the Congress." Normally, we did, we kept them pretty much informed, something like this operation we would've told them all about it before hand. I said, "This is just bolt out of the blue. I don't know what's going to happen." He said, "Well, you better go see the Secretary of the Navy!" So I went to see John Lehman and I said, "I've got some good news. We found the Titanic!" Well he jumped about two feet in the air. He said, "That's wonderful! That's marvelous!" and I said, "On top of that Mr. Secretary, they want you to go to Portsmouth to meet them when they return to port." Well, John Lehman was a wonderful politician, so, of course, he said, "Absolutely, I'll be happy to do it! No problem!" Then I got out of his office before somebody could ask me, "What are you doing looking for the Titanic?" The operation involving the reconnaissance of the Thresher and Scorpion sites and the Titanic was kept a secret until the 1990s, then it was released, and **National Geographic** made a pretty nice film about it. I don't know if you've seen it. The name if it is, **Titanic: The Final Secret**. I was in it, and it went through the entire operation that resulted in Bob Ballard finding the Titanic. Another unusual operation that I was involved in was the assistance that we provided to the British in the Falkland Islands War. I made the decision to allow the British to use our satellites for communications with their submarines and surface ships.

Wass: As I understand that led to a substantial gain in technology for propulsion and quieting our propulsion on our nuclear submarines. Can you talk about that?

Thunman: Well, I was responsible for the decision to solve their communications problem and that made me kind of a hero in England. Later I heard about a propulsor that the British were using on their new submarines. Propulsor, not propeller. Because of the good relations we had established during the Falkland Islands War, they invited me to England to look at the propulsor on one of their submarines in dry-dock. I was very impressed. And after working with our engineers, we decided that all future submarines would have propulsor and not propellers and that is the case today.

Wass: Can you talk about the advantage of propulsor system versus a regular propeller?

Thunman: Well, a propeller is prone to cavitation. No matter how well you design the propeller, how thin the edges are, how smooth they are, how they are located you'll get cavitation out it in the very low frequency range. You don't get that out of a propulsor. A propulsor is kind of like a jet engine and it was used in Tom Clancy's book, **Hunt for Red October** as the propulsor on a Soviet Submarine. Now that I think back that book led me to thinking about propulsor for use in our submarines. Speaking of Tom Clancy, my relationship with him was interesting. I was in my office one day and my Executive Assistant brought me the book, **Hunt for Red October**, published by the Naval Institute Press. We were very concerned about classified material in it. The book had not been cleared by the Navy. I called Clancy and invited him to lunch because I wanted to find out where he got the classified information in that book. The biggest problem I was worried about was the fact that our ability to trail other submarines was emphasized in the book. In those days we never mentioned the word trail, it was verboten. Later there was an operation conducted in the Atlantic where one of our SSNs trailed a Soviet ballistic missile submarine for about two weeks, but that operation hadn't been released at this time. Well, Clancy comes, and I found out that he was an insurance man for a living in Maryland, south of Annapolis. We sat down, and almost immediately I asked, "Where did you get this information that you put in your book?" After talking awhile, I had a private audience in my office there. I wanted to be to talk man to man talk with him. He said, "Well, I got it from tracking all you guys. Tracking you. All I did was connect the dots." I have to say; maybe you remember differently, I had not ever heard the term connect the dots before.

Wass: No, it's a more recent term.

Thunman: Earlier...and he said, "I went to your testimonies, I went to So and So's testimonies, I went here and went there and connected the dots." And I said,

“Well, that wasn't quite true’ -- because I knew he had the term "Crazy Ivan", which was the practice of the Soviets of turning and running at you if they had contact on you. It's called a Crazy Ivan; if you were trailing them they would turn and try to collide. I said, "You couldn't have got that from connecting the dots." Well, he didn't comment, but the dot that that was probably connected to was some Sonar man in a bar talking to him about his most recent operation. So, I went to Jim Watkins, I said, "Here's this book, we didn't know anything about it. It's out there and I understand everybody wants it." I really expected to hear from the congressional Intelligence committees. About that time Reagan read it, loved it, had Clancy to lunch, loved Clancy and all the energy went out of the problem. Clancy and I stayed good friends over the years. When I was President of Valley Forge Military Academy and College, he used to come up there all the time for nothing. I used him as a fund raiser over and over again. People would come from everywhere in the fundraising events, dinners, receptions if I had Clancy there and he'd talk to the cadets. The cadets would have him autograph everything; their underpants, their t-shirts. He was a good friend. I went up and visited him in his home, south of Annapolis. It was pretty funny, I remember coming up to his gate, you had to check in through some sort of speaker system at the gate, the gate opened, and I went up the hill. The first thing I saw was a sign, a caution sign that said, "Tank Crossing" and I went up over the hill and there was a tank that he had. [Laughter] He had, he loved to shoot guns, so he took me, took us, I went up there on one occasion with the retired Chief of Staff of the Army and had us shoot with the newest weapons, we were on this firing range shooting. It was the beginning of Schwarzkopf's move in Kuwait, the war went on around that timeframe. The British minister of defense wrote to Tom Clancy, "How do you think these things going to go?" Clancy wrote him back perfectly describing how he thought we would participate in the operation. This was before we did it. He showed us a copy it, I always thought that was amazing. The man had an incredible knowledge of the military.

Wass: And a good tactical military mind.

Thunman: Yes. He was a good friend. I'm sorry that he is gone now. I was the last Deputy Chief of Naval Operations for Submarine Warfare, those positions, there were three: Deputy for Surface, Deputy for Air, Deputy for Submarines had gotten too powerful.

Wass: They were called the Barons.

Thunman: Yes, the Barons. We each had our own money, and too much in the infighting went on to see how you could get some of the other guy's money. The Navy did the right thing...

Wass: But to close that chapter of your career, sad thing happened on your watch at the start of your tour as Deputy CNO, Admiral Rickover told you to make the Submarine Force the very best and only a year later, you were a part of his leaving the service with President Reagan. Can you talk about that episode?

Thunman: Yes.

Wass: That kind of closes the chapter of Rickover's life. Second.

Thunman: Sure, I'm glad you brought it up that way. He sat me down when I went into that job, I was kind of young for the job and I think I had the job because of him. Frankly, nobody ever told me that. He said, "It's absolutely important, vital that you make the Submarine Force the best that it can be." He said, "When I went into Submarines in the twenties, they were a bunch of bums, drunks. No professionalism whatsoever." He said, "It was a terrible organization, a terrible arm in our military." He said, "You can't let that happen again. You've got to set a standard and live that standard. And you've [been] taught to do that and it's essential that you do that." He sat me down and he gave me a book by German Admiral Bauer that had been written, I guess. in the 30s. He had translated it, it was about how to, the best way to tactically use submarines. Wonderful book, I've got it at home. It's a type written version of it with his notes in the margins. He said, "Here, this is a good place to start. Listen to this man." And the guy was not only tactically proficient at the time -- of course, we're talking about the capabilities of submarines in the thirties -- he's also talking about leadership, and high standards, and training, and then operations. So, that was very much on my mind when I went into the job. In 1982, he was having a lot of problems, especially with [General Dynamics] Electric Boat. He was claiming Electric Boat had fraudulently listed some 600 million dollars in costs of building submarines that were bogus. The system was coming after him about trinkets that had been given to him. Which was improper, you're not supposed to receive anything. They were attacking him on all sides, but he wouldn't back down. President Reagan had made the decision not to continue, since he was over 65; he had to be continued every two years. He was told that the President wouldn't continue him. Rickover called me and said, "It wasn't President Reagan not continuing me, it was "Industry". Industry got me, I want you to call every submarine admiral in the Navy and tell them that Industry got me fired." And said to him, "Admiral, I can't do that it's disloyal to the Navy. But I tell you this, I promise, in my lifetime I will do that. Whenever I get one on one with a submarine admiral, I will do that. I'll make sure that that story gets everywhere." he said, 'That's good enough.'

Wass: And as I remember the details, there was a general manager of the Electric Boat yard that was at the center of the allegation....

Thunman: Valiotas....

Wass: Valiotas, who later escaped to Greece and was not prosecuted...

Thunman: Later, they found that Rickover was right, he escaped to Greece, he's still there, today and was never charged. The other thing that Rickover said later, he said, "You know, they dropped all the charges as soon as I retired." There was a lot of things going on at that time. I think was left out of some of them, because they were trying to figure out who was going to relieve Admiral Rickover. Apparently, my name was one of the three or four, although I never heard that officially. Some of the yeomen that worked up in the CNO's office said, "You're in the pile." So they weren't telling me everything and I was certainly not qualified at that point to do that job. The Admiral, he told me about going to see the President with Secretary Lehman and with the Secretary of Defense. The President was going to present him with the [Presidential] Medal of Freedom [one of the two highest civilian awards.] As I recall, I was asked whether I thought it was a good idea by someone in the Secretary's office. I said, "That's not a good idea" and just let it go. Let the Admiral deal with what's going on as it is. In any case, they got them together, I wasn't there. But the story is and it's a good story, Rickover told me the story, he said, "I told them, 'when we got in there, I told Reagan, I said, 'Mr. President, this Piss Ant has been lying to you!'. Now, you'll read different in other words, but that's how it went. "This Piss Ant has been lying to you and we've got to talk." and apparently, Reagan cleared the room. They talked. And I know Rickover called me and said, "It's ridiculous! They want to make me the Presidential Advisor on Nuclear Power.", he said, "What the hell, they don't have one of those now. Why do they need one, now?" And that's the way Rickover thought, you know what you did, you did it because you needed it. Well, that's how it went. I stayed in contact with Admiral Rickover after he left office. I put together the office for him in the Navy Yard; I got the yeoman, the first yeoman he had there. My God, Rickover tore him apart. So I went and took the guy out of there, he was almost in tears. I went and got a tough Submarine [Force] yeoman that I knew and brought him in there. He would talk back, and Admiral Rickover and he got along fine. He was in that office, he had all of his binders, he had a hundred binders of different things that he had collected over the years; writings, publications, articles about the hundred topics that he thought life was all about. They were all there behind him in his desk. As I recall, I don't remember seeing it, I've been told that he had a picture of Benedict Arnold on one side and John Lehman on the other. [Laughter] That may or may not be true.

Wass: And I think if I recall correctly, one of his side interests and a major interest in his life was education. Talk a bit about that.

Thunman: Yes, well, I just finished the binder description, he called me to look at the binders and he said, "Let me show you the letters that I got from my wife, first

wife when she was in Germany getting her Ph D. in education." I told him at the time, I said, "Gee, you want me to see letters from your wife?" He said, "Ah, come on!" She was, even then, was talking about education and what she was learning and at the same time talking about Adolf Hitler and that he was a very dangerous man. I thought she was pretty smart to recognize that. Education was so important to him. Those Nuclear Power Schools were important to him. The way they were set up, the way that they were run. His, probably his number one hobby, was education. He got involved with that, with a private organization that he set up. I understand there are some education facilities here in Chicago that have been developed by Rickover and funded by Rickover. I understand there are two; one is a high school, another more, almost like a trade school, I don't know much about them. That was the most important thing that he could do, was to continue in the world of education and do some writing in it, and do some speaking in it, and see if he could honestly improve in our efforts in the country. He had a stroke, had some cancer, I think, I had left OPO2 -- this is about 1986 -- I went to go see Rickover, knew he was ill; and saw Eleanor Rickover who's been a good friend, his second wife. I think Ted Rockwell talked about his last moments with Rickover and he said how he made sure that Rickover understood that he had brought professionalism, quality, integrity, and excellence into, not only into the Nuclear Submarine Force but into the Navy, doing some of these things that we've talked about.

Wass: I can certainly attest that he was the most influential man in my young life and helped me mold skills and my principles that I've lived my life by.

Thunman: Well and the same with me. I said to him when I went to see him at the end, "Admiral, I... You know..." I didn't want to get slushy, I said, "Admiral, I'm just here to thank you for all that you did for our submariners over the years." and he said, these are his exact words, I wrote this down, "I only gave you the opportunity to use your God given talents." I said goodbye and that was it. And that was his response. He was a great man, interwoven throughout my career; everything I always did seemed to end up back with Rickover in one way or another. I wasn't a major advisor to him, in any way; I didn't develop anything with him in any way. But I did have a relationship with him that I will always treasure.

Wass: He certainly in using today's parlance would not win any political correctness awards, but he was one of the most influential men to keep this country safe in the fifties through the eighties. I think there's little question about that.

Thunman: He was highly respected by the Congress. You know going back to the days where he didn't accept his Medal of Freedom in the meeting with Reagan, but almost within two weeks the Congress gave him one. I went to that one. They just applauded him until they, almost fell down and, of course, his special

relationships, Scoop Jackson, others, Stennis, they were people who were with him all the way and funded him, who respected him, because he spent the money well. He did what he said he could do. He did what he said he was going to do.

Wass: I think after he built the Nautilus, the first nuclear submarine, he actually returned to Congress and said I didn't spend this amount of money and returned it to them....

Thunman: A million dollars...

Wass: ...A million dollars. It might have been the first time in the history of America, that that ever happened.

Thunman: Yes, yeah that's right, that's a good point.

Wass: So, you had been Chief of Naval Education and Training for a year by the time Admiral Rickover died...

Thunman: Yes.

Wass: ....And you had some great challenges in that. You were there for almost three years, three years almost to the day and wonder if you would close our oral history talking about this final tour of yours in the Navy?

Thunman: I was going to retire. Admiral Watkins had tried to make me Chief of Naval Personnel twice and Lehman wouldn't do it. And again, I think maybe Lehman just didn't want another Rickover-like guy there, I don't know what his reason was. Lehman turned around and asked me to go down and be the Chief of Naval Education [and Training Command] because he was having political problems down there in Florida. I had a good relationship with the Congress in developing the Seawolf [class submarine] program, I probably talked, personally, with maybe ten, fifteen, Senators; forty or fifty Congressmen maybe more, but I had a good relationship with Congress. As a matter of fact, Watkins said, he said to me, "My God, you've got a great relationship with the Congress." So, he asked me to go there, about that time I was starting to have problems, physically, and I thought, "Well, maybe I had better not retire. Maybe I should stay, because I need to stay close to the Navy medical system." But I was interested in being involved with the training side; I'd certainly been in that business a lot in my career.

Wass: And if I am correct, that's the largest Navy Shore command?

Thunman: Yes.



Wass: How many military and civilian personnel are there?

Thunman: Well, there's something like 44,000 military and civilian people and you ran Naval Aviation Training, you didn't run the Naval Academy, but you ran everything else in the training world. I got very interested in aviation, naval aviation training. I passed all the requirements to go up and fly in the jets. I used to fly around the country in the jets; I'd have my aide fly. I'd sit in the right-hand seat. Everybody thought that was cool, I did to. I thought it was fun. I flew with the Blue Angels. There were a couple of things that I thought were important. I convinced the Secretary of Navy, the new one, Jim Webb to fund our NROTC program adequately. Also to include a couple other colleges, Carnegie Mellon -- I think was one that I pushed for. I upgraded the NROTC selection program. My thought was we should have the same selection standards in the NROTC that you have at the Naval Academy. You got to get the same kind of guy. So, I didn't have a good relationship with the then Chief of Naval Personnel, because it was costing him more money, but I was able to go up to Webb. I was senior enough where I didn't care who, what anybody thought of me except for the CNO.

Wass: That's one of the advantages of aging admiral [Laughter]. I've noticed myself.

Thunman: The... and he gave me the money, Webb. I tried to reorganize the CNET [Chief of Naval Education and Training] with doing away with CNTT [Chief of Naval Technical Training]. They had; it was very complex. CNET then CNTT and I thought we don't need CNTT. It was established in Millington and it was a big political issue, had a staff, had an Admiral.....

Wass: Millington, Tennessee.

Thunman: I had an admiral there. I tried to do away with him and I got cut down by Jamie Whitten who was head of the Congressional Appropriations Committee [i.e. House Committee on Appropriations], he didn't want to do away with his Admiral.] I had offered him up to Trost as a savings. But I enjoyed it, I tried to get into Naval Aviation to try to find out about Naval Aviation. I was pretty impressed. I was able to cut out some of the, a significant amount maintenance and outsource it and save a hell of a lot of money. Brought in civilian instructors for some of the aviation training, ex-Naval aviators, retired -- they loved it. They were perfect, they loved the jobs and they would fly, and I forget the type aircraft, but they would get out and fly. The navigators and others, not the pilots would be trained by them and they loved it. They had high standards, they came to work every day, they looked like they were ready for a Naval Academy inspection, and I mean they thought it was a great thing to do. I lead a delegation to China, nine Navy captains. Ten days, seven cities. Went to sea on a destroyer, went to sea on a patrol craft. Walked through a diesel electric

submarine, visited their submarine base. Talked to their Submarine School. Talked to their War College. That was very interesting to me.

Wass: Just going back a bit to your upgrading your requirements for NROTC students, I think the fruits of that came out once again yesterday in an Admiral's List [ List of US Navy four-star admirals?] that had about twenty or so admirals; seven from the Naval Academy and the other thirteen from NROTC....

Thunman: Is that right?

Wass: And you know in the old days, meaning when I was a young man, you were hard pressed to find many from NROTC. And now we have the Academy in the minority of the Flags. So the programs are excellent.

Thunman: Well, it is an excellent program. I've helped a lot of youngsters get into the Naval Academy. They've come to see me in Springfield and then I also say, "Well look you know, keep all your options open. Look into the NROTC program; find out how to do it. Make out the application." And many of them go, when they find out about it, gee I can be a Naval Officer and do that too. They'll go in the NROTC. I had this one young gal, the sharpest gal I ever met, you know a youngster. She went to Duke [University] instead of the Naval Academy she chose the NROTC. It pays the way; it's not a financial thing. I understand it, it's a great program. When I left CNET, I had picked out a woman to run the program who had been my, one of my principle assistant's and she did a wonderful job over the next ten, fifteen years. I used to hear from her. We established great relationships with the NROTC program itself. They have a board of directors of academics from different schools and I would have them visit there at the CNET. Before, the past there had always been arguments between the Navy and this and I was able to smooth that over and get to working with them. That was a fun tour there.

Wass: And you were awarded the Distinguished Service Medal for that tour and then retired in November of 1988 and you had your retirement ceremony where?

Thunman: On the USS Rickover.....

Wass: On the deck of the topside of the Rickover...

Thunman: ...Carl Trost, who was CNO. He sent the Rickover down there for me...

Wass: To Pensacola?

Thunman: Yes. It was funny - I had this model, submarine model of the [USS] Chicago on my desk and I also had a painting of an SSN shooting a VLS [Vertical Launching

System] Missile. The model I got from Newport News, the painting I got from Electric Boat. And both of those, I think I told you I wrote a letter to the Navy and said, "I am keeping this for you, this belongs to you, you can have it whenever you want to." So, when I left, Carl Trost came in the office and looked around and, of course, everything was kind of bare and he looked and saw those two items there, the model and the painting. He said, "Why aren't these packed up?" and I said, "I can't do that, the Navy owns that." and I said, "I already got questioned about that model by the NIS, the Navy Investigative Service." And he laughed, and I laughed. About a month later, I get... a big package came. It was the painting and the submarine. So, I called my secretary back there and said, "Hey, I'm not supposed to have these things, they belong to the Navy." She said, "No, Admiral Trost said send them to you." [Laughter]

Wass: Well, that was a nice end to that and as we fast-forward to today in April of 2015, we have under construction now the USS Illinois, SSN-786, the first ship, naval ship named USS Illinois since 1897 and the Secretary of the Navy, a few weeks ago announced the building of the USS Hyman G. Rickover, which will be another Virginia Class Submarine. So, Admiral thank you for traveling up from Springfield today. We wish you well and good health and thank you for the insights and thank you for your marvelous service which helped keep this country free. God bless you, Sir.

Wass: Thank you very much for your professionalism in putting this interview together I appreciate it very much personally. Thank you...

The third part of the interview addresses the USS Pueblo incident in which North Korea seized the Pueblo, off the Coast of North Korea in 1968. Vice Admiral Thunman was executive officer, on board the USS Snook, at that time.

Wass: Admiral, while you were the commanding officer of [USS] Plunger, I believe the USS Pueblo was captured by the North Koreans, a dark spot in our military history. The commanding officer, Lloyd Bucher, who went I believe by the name of Pete, graduated a year apart from you at the Naval Academy and was a submarine officer. Could you talk about that Pueblo incident and about Commander Bucher?

Thunman: Well, there's a lot I don't know about it. But I do know that Pete was on the staff of the submarine squadron we had in Yokosuka as an Intelligence officer. That's where I had met him coming off of an operation, a debriefing there, and he was present at the debriefings. Actually, that occurred, I think, when I was an executive officer, I can't be sure. But that was where I had been involved with him. Later on, somehow through the Intelligence community, he got command of this, of the Pueblo, which was a small auxiliary ship that had been used up in

the Washington, State of Washington area for torpedo firing exercises. It actually had torpedo tubes in the bow. Somehow, this got out to the Western Pacific as an Intelligence collection ship. As I understand it, it really didn't go through the normal approving scheme by the fleet commanders. It ended up as kind of an Intelligence collector outside of normal operations that we were conducting. Bucher of course was taken by the North Koreans and after he had warning that they might do something. They came out one day and circled him as I understand it, the next day they came and took the ship.

Wass: What do you think he should have done after they gave him that warning?

Thunman: Well that warning, there was no question in my mind, he should have taken off and left at flank speed away from them. His ship had no armament, there was no way they could really defend themselves from those torpedo, torpedo boats of the North Koreans. Why he stuck around, I don't know. It's not what I would have considered to be a good command decision. I don't know...I think his crew members had great respect for him, the way he was, when he was captured and what he did. I don't know him any more than that. I still have been very surprised that the ship ended there, ended up there doing what it was doing without the mainstream of the naval commanders knowing about it and setting the parameters for their operations.

Wass: There was some ultimate controversy afterwards where I think Commander Bucher tried to shift responsibility to his Executive Officer and the Executive Officer came out with about a 180-degree viewpoint. Would you characterize Captain Bucher's submarine service as distinguished or not?

Thunman: No, he was not selected for Submarine Command. He was never selected to be a Submarine executive officer, he was on the staff there, I think several years, two or three maybe more. He was certainly not one that had a lot of respect as a staff member but, he was able to convince somebody in higher authority, and I have no idea who, that he could carry out that operation as commanding officer of that small auxiliary.

Wass: Thank you for shedding some light on that tragedy, that national tragedy, in our naval history, thanks.

Thunman: You're welcome. It was a great pleasure to do the interview with you.