



41 For Freedom

The extraordinary story of why and how the
U. S. Navy built 41 ballistic missile submarines
in 7 years from 1958 – 1965

6 April 2016

Reception 1800-1900
Presentation 1900-2100

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Welcoming Remarks

Rear Admiral John B. Padgett III, USN (Ret.)
President and Chief Executive Officer
Naval Submarine League

Introduction and Program Summary

Dr. David A. Rosenberg
Seminar Chair and Moderator

Strategic Submarine Programs Perspective: 1955-1963

From the SSP video archives

Polaris: Why, What and How?

Dr. David A. Rosenberg

Submarine Construction, Maintenance, and Modernization

Captain Patrick G. O'Keefe, USN (Ret.)
with Rear Admiral Millard S. Firebaugh, USN (Ret.)

Fleet Ballistic Missile Submarine Command and Operations

Captain James C. Hay, USN (Ret.)

SSBN Command and Operations, Part II

Vice Admiral James A. Sagerholm, USN (Ret.)

Our Participants



Rear Admiral John B. Padgett III, USN (Ret.)

Admiral Padgett was elected President of the Naval Submarine League in October 2010. He serves as the Chief Executive Officer and supervises the daily activities of the League. Admiral Padgett previously served as Vice President of Business Development and Strategic Planning for General Dynamics Electric Boat, the principal designer and builder of submarines in the United States.

A career submarine officer, Admiral Padgett commanded the attack submarine USS *Omaha* (SSN 692), served as Commander, Submarine Squadron ELEVEN and was the 75th Commandant of Midshipmen at the United States Naval Academy. Following his selection to flag rank, Admiral Padgett served on the staff of United States Strategic Command, on the staff of the Chief of Naval Operations, and as Commander, Submarine Group TWO, and concurrently, as Commander, Navy Region Northeast.

His final assignment on active duty was as the 30th Commander, Submarine Force, United States Pacific Fleet. Responsible for the operation, maintenance, and strategic planning for all U.S. submarines in the Pacific and Indian Oceans, he worked closely with other submarine forces in the theater. A 1969 graduate of the United States Naval Academy, where he earned a BS in Mechanical Engineering, Admiral Padgett also holds a Master of Science degree in Engineering Science and Mechanics from the Georgia Institute of Technology.



Dr. David Alan Rosenberg

Dr. David Alan Rosenberg is the Class of 1957 Distinguished Chair of Naval Heritage in the History Department at the U.S. Naval Academy for the academic year 2015-2016. A professional staff member and project director at the Institute for Defense Analyses in Alexandria, Virginia, he was educated at American University (B.A., 1970, History), and the University of Chicago (M.A., History, 1971; Ph.D., Military History, 1983). He previously served as a Senior Professor at the U.S. Naval War College, Director of Task Force History for the Vice Chief of Naval Operations for Operation IRAQI FREEDOM, civilian member of the Navy Operations Group/DEEP BLUE, Admiral Harry Hill Professor of Maritime Strategy at the National War College, and tenured professor in the Center for the Study of Force and Diplomacy at Temple University. Rosenberg chaired the Secretary of the Navy's Advisory Subcommittee on Naval History from 1995 to 2006. A retired Captain in the Navy Reserve, he served as a senior staff officer at the Office of Naval Intelligence, commanded two ONI reserve units, and originated and led the Director of Naval Intelligence project on Cold War Operational Intelligence Lessons Learned, subsequently serving as editor and co-author with Christopher A. Ford of the Naval Institute Press book, *The Admirals' Advantage: US Navy Operational Intelligence in World War II and the Cold War*.



Captain Patrick Gordon O'Keefe, USN (Ret.)

Born in New Orleans in 1927 Patrick O'Keefe enlisted in the Navy in 1945. He obtained an appointment to attend the U.S. Naval Academy and graduated in 1949. His first assignment was on USS *Dennis J. Buckley* (DDR-808), where he served as Assistant Gunnery Officer. Inspired by his Commanding Officer, a WWII submariner, O'Keefe applied for submarines. His first submarine was USS *Baya* (AGSS-318), a research submarine that worked with the Navy Electronics Lab, San Diego, where he qualified in submarines and qualified for command. During the Korean War he helped standup a submarine group in Japan as Assistant Operations and Communications Officer. At post graduate school in Monterey, he earned a Mechanical Engineering degree. Assigned to Charleston Naval Shipyard, he helped establish a submarine maintenance element for submarines changing homeport from Key West. His next assignment was to COMSUBPAC staff as assistant material officer, to establish nuclear submarine support and maintenance elements.

Assigned to Portsmouth Naval Shipyard for construction of USS *Swordfish* (SSN-579) and USS *Seadragon* (SSN-584), CAPT O'Keefe completed nuclear power training that was conducted at the shipyard. He led the first refueling of USS *Nautilus* (SSN-571), and was the Production Officer in 1966 for the one-year, SUBSAFE overhaul and conversion of USS *Sam Houston* (SSBN-609) from Polaris to Poseidon. Captain O'Keefe's final assignment was Supervisor of Shipbuilding at Groton, CT. After retirement, he worked for General Dynamics as a senior vice president at Bath Iron Works. He resides in Annapolis, Maryland.



Captain James C. Hay, USN (Ret.)

Captain Hay was born in Ramsey, New Jersey. Graduating from the U.S. Naval Academy in 1954, he served one-and-a half years aboard a destroyer, then attended Naval Submarine School. He served in two diesel-electric submarines, and completed nuclear training, with assignment as Weapons Officer and later as Electrical and Reactor Control Officer, in USS *Triton* (SSN-586). In 1962 he was assigned as Engineer Officer in USS *Haddo* (SSN-604) during new construction, and later served in USS *Barb* (SSN-596) as Executive Officer. From 1967 to 1972 he served as Commanding Officer of two strategic submarines: USS *George C. Marshall* (SSBN-654) and USS *Daniel Boone* (SSBN-629). Captain Hay's shore tours included Military Assistant to the Assistant to the Secretary of Defense (Atomic Energy) in Washington DC and command of Naval Submarine Base New London, Groton, CT. He also served as Chief of Staff, Submarine Group EIGHT and Assistant to the Executive Director, Advanced Technology Panel, Office of the Chief of Naval Operations. Following retirement in 1984 he worked for Santa Fe Corporation in Alexandria, VA and as Director for Undersea Warfare Affairs, General Dynamics in Rosslyn, VA. He has also served as Executive Director of the NSL. He now works as a maritime consultant and writer and is the Editor of *The Submarine Review* for the League. He resides with his wife, Ruth, in Williamsburg, VA.



Rear Admiral Millard S. Firebaugh, USN (Ret.)

Admiral Firebaugh graduated from MIT and was commissioned an engineering duty officer in 1961. After duty in USS *Mitscher* (DL-2), he returned to MIT graduating in 1966 with an SM in EE and a Naval Engineer degree. After qualifying as a salvage diver, he was a ship superintendent in the Portsmouth Naval Shipyard overhauling submarines, including the refueling and Poseidon conversion of USS *Sam Houston* (SSBN-609). He returned to MIT receiving an ScD in Ocean Engineering in 1972. Then he supported the Navy's deep submergence assets at Submarine Development Group One and later administered contracts for the construction of *Los Angeles* Class submarines at Electric Boat.

In 1979, he began service at the Naval Sea Systems Command in submarine design and naval architecture. He managed the design of the SSN688 Class Vertical Launch System deployed on 32 ships and initiated the *Seawolf* Class submarine program through design and award of contracts for the first two ships. He was Chief Engineer of the Naval Sea Systems Command, serving until retiring from the Navy in 1995.

In 1997 he returned to submarines at the Electric Boat Corporation, retiring in 2005 from the position of Vice President Innovation and Chief Engineer. He is now Minta Martin Professor of Practice at the Center for Energetic Concepts Development, Department of Mechanical Engineering, University of Maryland. He and his wife Barbara live in Annapolis, Maryland.



Vice Admiral James A. Sagerholm, USN (Ret.)

VADM James A. Sagerholm, USN (Ret.) was born in Uniontown, PA, 23 December 1927. After graduating from the Baltimore Polytechnic Institute in 1946, he enlisted in the Navy. In 1948 he was appointed to the Naval Academy by the Secretary of the Navy, and graduated 9th in the class of 1952. He saw action in the Korean War aboard the cruiser USS *Rochester* (CA-124) during 1952 -1953. He next served in coastal minesweepers, commanding USS *Rhea* (MSC(O)-52), had duty in the Office of Naval Intelligence, and was then assigned to destroyers, serving as executive officer of USS *Sproston* (DD-577). In 1963, as a LCDR, he was ordered to submarine and nuclear power training as part of the push to put qualified personnel on board the 82 Blue and Gold Crews of the "41 for Freedom" Fleet Ballistic Missile Submarines. He qualified in submarines on USS *Seadragon* (SSN-584), and then served as commissioning executive officer (Blue Crew) of USS *Mariano G. Vallejo* (SSBN-658) before taking command of USS *Kamehameha* (SSBN-642) (Gold Crew) and conducting six deterrent patrols in the Pacific, Mediterranean and the Atlantic based on Guam and then Charleston, SC, from 1968 to 1971.

Following duty in the the Chief of Naval Operations' analysis and budget offices, he commanded the Naval Intelligence Support Center (NISC) in 1974-1975 and then, as a Rear Admiral served as Deputy Director of Naval Intelligence and worked on Navy

budgeting and programming on SECNAV staff in 1978-1981. He next commanded the South Atlantic Force, making two circumnavigations of the South American continent, and instituted the first West African cruise in 1978. Following a year as Executive Director of the President's Foreign Intelligence Advisory Board in the Reagan White House, he became Chief of Naval Education and Training as a VADM in January 1983, serving until he retired 1 November 1985. He lives near Annapolis, Maryland.

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Naval Submarine League



The primary mission of the Naval Submarine League is to promote awareness of the importance of submarines to U.S. national security.

The Naval Submarine League is a professional organization for submariners and submarine supporters. Benefits of Naval Submarine League membership include association with a dedicated group of submarine professionals, a professional journal – The Submarine Review, information on submarine developments and issues to assist members in creating public awareness of submarine capabilities and value to U.S. defense, a forum for an exchange of thoughts on submarine matters, and an invitation to the Annual Symposium.

The Naval Submarine League is a 501(c)3 non-profit founded in 1982. For more details and how to join, visit the League's website www.navalsubleague.org or call (703) 256-0891.

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