

# USS BATFISH [SSN 681]



# USS BATFISH (SSN 681)

*Built by*

**GENERAL DYNAMICS**

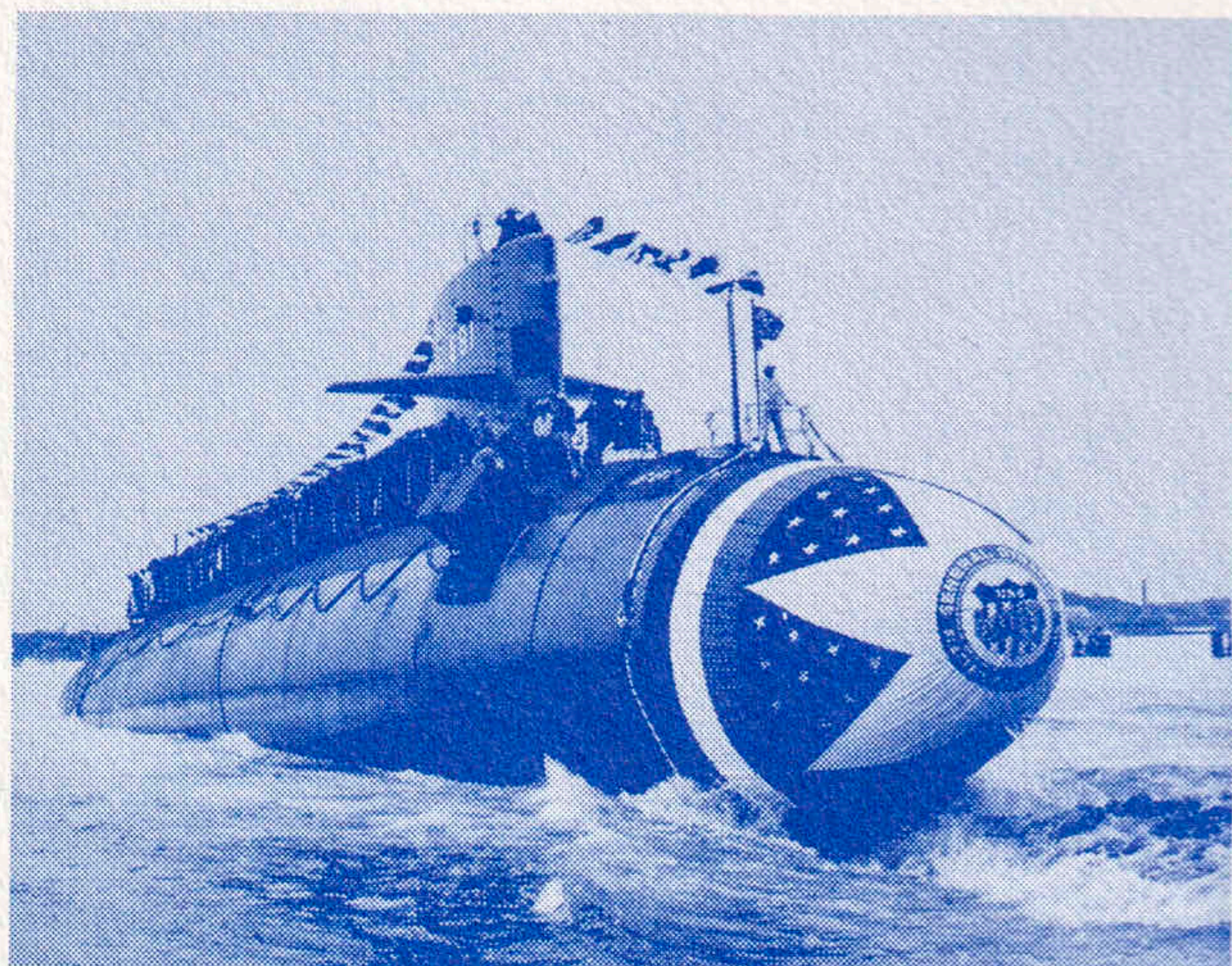
*Electric Boat Division*

*Groton, Connecticut*

KEEL LAYING  
February 9, 1970



CHRISTENING  
October 9, 1971



LAUNCHING  
October 9, 1971



UNDERWAY ON INITIAL SEA TRIALS  
June 5, 1972



COMMISSIONED  
September 1, 1972



**Ships Sponsor**  
**MRS. ARTHUR R. GRALLA**



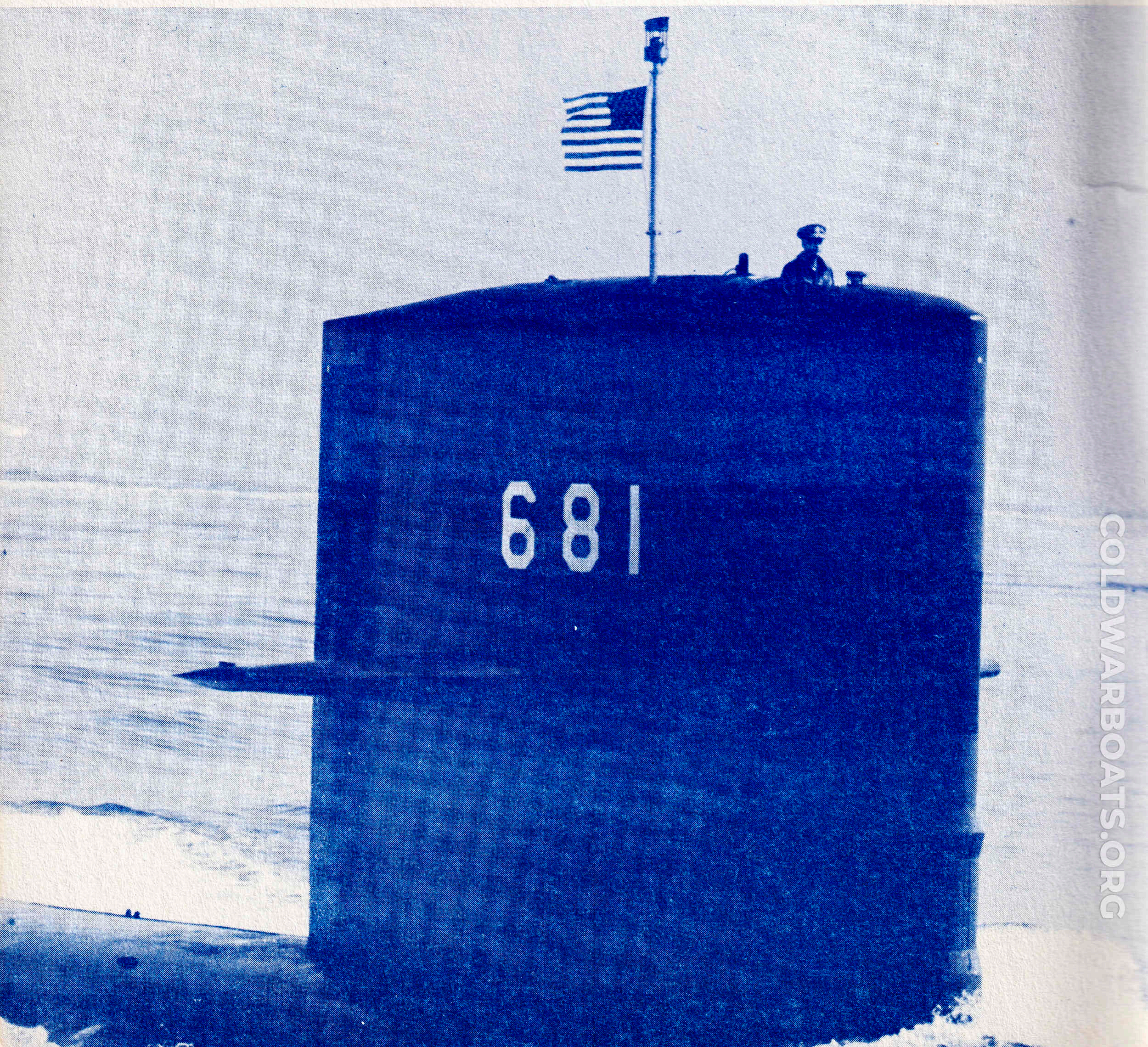
**Commissioning Commanding Officer**  
**CDR. RICHARD E. ENKEBOLL**



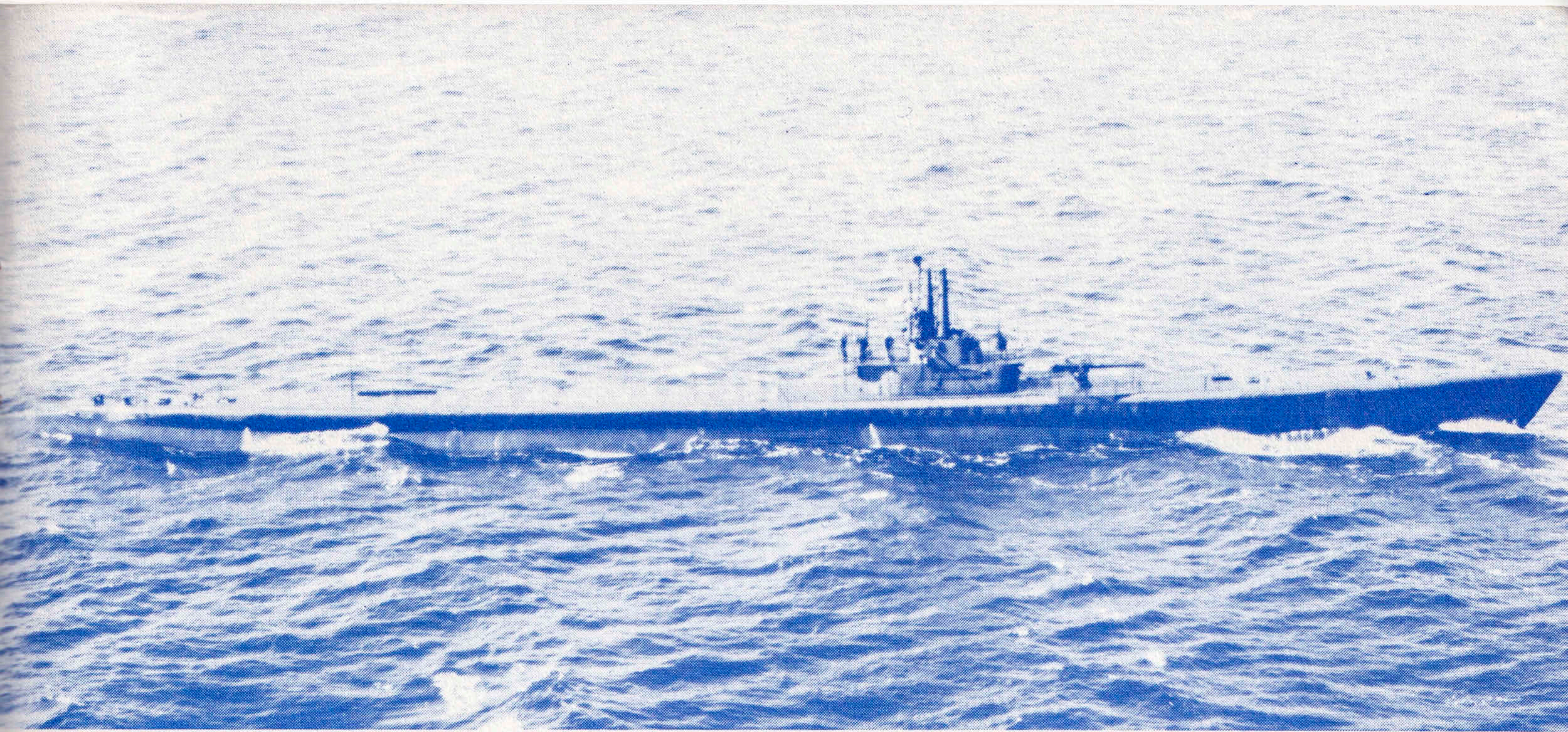


## SHIPS MISSION

The new BATFISH (SSN-681) is a STURGEON-Class submarine designed for a length overall of 300 feet, 6 inches, extreme beam of 31 feet, 8 inches, a surfaced displacement of 4,464 tons, submerged displacement of 4,967 tons, and accommodations for 12 officers and 95 men. Deep-diving submarines of vast range, ships of her class are adept in offensive operations against hostile submersibles. She will be particularly suited as a "killer submarine" for joint operations with units of the antisubmarine warfare forces. BATFISH will also have capabilities as a minelayer, supporter of underwater demolition team operations, and weather reference station. She may perform many types of reconnaissance and intercept missions; land and recover raiding parties; or provide lifeguard services. Vast range and terrible striking power through torpedoes are the hallmark of the nuclear-powered submarine. She is capable of speeds in excess of 20 knots at depths greater than 400 feet.







## A HISTORY OF BATFISH

USS BATFISH (SSN-681), a nuclear powered attack submarine, is the second ship of the Fleet to be named for a flat pediculate fish common in waters of the West Indies, commonly known as the stingray. She is named in commemoration of fleet submarine BATFISH (SS-310) which was awarded the Presidential Unit Citation and nine battle stars for combat operations during World War II.

The first BATFISH was built by the Portsmouth (N.H.) Naval Shipyard, where her keel was laid 27 December 1942. She launched 5 May 1943 — under sponsorship of Mrs. Nellie W. Fortier of Chocorua, N.H., mother of six sons then serving in the armed forces — and commissioned 21 August 1943, Lieutenant Commander Wayne R. Merrill, U.S. Navy, commanding.

BATFISH (SS-310) was designed for a length overall of 311 feet, 6 inches, extreme beam 27 feet, 3 inches, standard displacement 1,526 tons, mean draft 15 feet, 3 inches, submerged displacement 2,391 tons, surface speed 20.25 knots, submerged speed 8.75 knots, and a complement of 6 officers and 60 men. She was originally armed with ten 21-inch torpedo tubes, one 5-inch 25 caliber gun, one 40 mm gun, and two .50 caliber machine guns.

Following shakedown training along the New England Coast, BATFISH departed New London, Connecticut, in mid-October 1943 for combat operations in the Pacific. She transited the Panama Canal enroute to Pearl Harbor, arriving 19 November for final readiness training before proceeding to Midway Atoll. She departed Midway 11 December to conduct her first war patrol in waters south of Honshu, Japan.



BATFISH entered her patrol area 29 December to encounter near-typhoon weather which greatly hampered operations for the next two weeks. She made her first kill the night of 19 January 1944 when she attacked a 4-ship convoy and sank the 5,486-ton cargo ship HIDAKA MARU. Patrol operations were terminated 24 January and the submarine returned to Midway for refit 30 January. She made a similar patrol to the Honshu area 22 February-15 April, but returned to Pearl Harbor empty-handed. Not one target worthy of torpedo fire was encountered during the 54-day patrol in heavy weather and near-typhoon gales.

Lieutenant Commander John K. Fyfe, USN, assumed command of BATFISH upon her arrival at Midway from Pearl Harbor 15 May 1944. Eleven days later she was enroute to conduct her third war patrol in waters south of the Japanese home islands. Her torpedoes smashed into an unidentified Japanese training ship the afternoon of 10 June. A few minutes after this attack the submarine was severely shaken by a tremendous explosion, possibly a bomb from an aircraft, but continued on patrol. A small cargo ship and a tanker were attacked the afternoon of 18 June. The smaller target was hit, but the other two torpedoes missed and ended their run at the edge of a wall-terraced garden in sight of the city of Andakino.

BATFISH torpedoed and sank the 990-ton Japanese cargo ship NAGARAGWA MARU on 22 June, escaping without damage from enemy escorts which dropped 50 depth charges. Her attack approach on three destroyers was abandoned 28 June when an aerial bomb "fell from nowhere", shattering a few glass gages and knocking cork from her bulkheads. A second approach was spoiled by a "freight train noise" which alerted the enemy ships to the position of the submarine. Two torpedoes barely missed the stern of BATFISH as she turned away to evade and make repairs. The submarine attacked a convoy the night of 29 June but torpedoes missed the target and escorts held BATFISH down with depth charges until the convoy was beyond range. She sank a trawler with gunfire 1 July and returned to Midway Atoll 7 July for refit.

BATFISH conducted her fourth war patrol in the vicinity of the Palau Islands. She departed Midway 31 July 1944, sank a floating mine with gunfire 4 August, then sank Japanese Mine-sweeper Number 22 (492 tons) while off Velasco Reef on 23 August. She again closed the reef on 26 August, firing a spread of torpedoes which finished the destruction of Japanese destroyer SAMIDARE (1,580 tons), previously damaged by carrier-based aircraft. The submarine served on lifeguard station for aviators off Peleliu 27-28 August, then departed her patrol area 3 September for Fremantle, Australia, arriving 12 September.



BATFISH departed Fremantle 8 October to spend her fifth war patrol in support of the liberation invasion of the Philippine Islands. Two of her torpedoes passed under the shallow draft of a fast patrol craft the night of 19 October and failed to explode. She was soon on station in the Sulu Sea off northwest Mindanao, one of the strategic positions taken by Southwest Pacific Force submarines on a line extending from North Borneo to Northern Luzon. She intercepted a convoy the night of 27 October but destroyers temporarily drove her from the track. She trailed the enemy into San Fernando Harbor 7 November and was temporarily "boxed in" by five fast patrol craft before she escaped. She reentered the harbor the afternoon of 11 November, sending torpedoes into moored cargo ships, then quickly retired to the open sea.

On the night of 14-15 November, BATFISH joined submarines RAY and RATON in coordinated attacks on a four-ship convoy. Several torpedo hits were scored by BATFISH but sinkings were not confirmed. She returned to Pearl Harbor 1 December for refit.

BATFISH commenced her sixth war patrol from Pearl Harbor 30 December 1944. This patrol took the submarine into the South China Sea, south of Hong Kong, east of Hainan, thence into the Luzon Straits. She was a unit of a hunter-killer group called "Joes' Jugheads," comprising herself, ARCHERFISH, and BLACKFISH.

BATFISH was awarded the Presidential Unit Citation for extraordinary combat achievements during this sixth war patrol. Persistent and aggressive, she relentlessly tracked down the enemy, and in three separate brilliantly executed attacks destroyed three Japanese submarines. She scored her first sinking 9 February 1945. Her victim was first identified as Japanese submarine I-41 but records available after the war revealed the target must have been Japanese submarine RO-55. Two days later BATFISH sent the 525-ton Japanese submarine RO-112 to the bottom. On 12 February she torpedoed and sank Japanese submarine RO-113. Having sunk three enemy submarines in four days, she departed her patrol area 17 February. After fueling at Apra Harbor, Guam, she reached Pearl Harbor 3 March.

BATFISH departed Pearl Harbor 6 March 1945 and arrived San Francisco 13 March for overhaul in the yard of the Bethlehem Steel Shipbuilding Company. She put to sea from San Francisco 31 May and arrived at Pearl Harbor 6 June to prepare for further combat operations.

BATFISH commenced her seventh war patrol from Pearl Harbor 26 June 1945. After fueling at Saipan, she was assigned lifeguard patrol station in the East China Sea. She battle-surfaced off the north coast of Yaku Shima 24 July,



shelling the beach as part of a diversion plan for submarines entering the Sea of Japan. The next day she received word that a B-25 bomber had crashed into the sea and commenced a search which continued through the night. A patrol aircraft guided her to the three survivors the morning of 26 July. The rescued Army aviators were transferred to hospital facilities at Iwo Jima on 5 August.

BATFISH took up a new lifeguard station off Honshu until close of hostilities on 15 August 1945. She then rendezvoused with submarine TIGRONE to embark a rescued aviator for transport to Midway where she terminated her seventh war patrol 22 August. The submarine called at Pearl Harbor (26-30 August) and reached San Francisco, California 9 September. Following inactivation overhaul in the Mare Island Naval Shipyard, she decommissioned 6 April 1946 and was assigned to the Pacific Reserve Fleet.

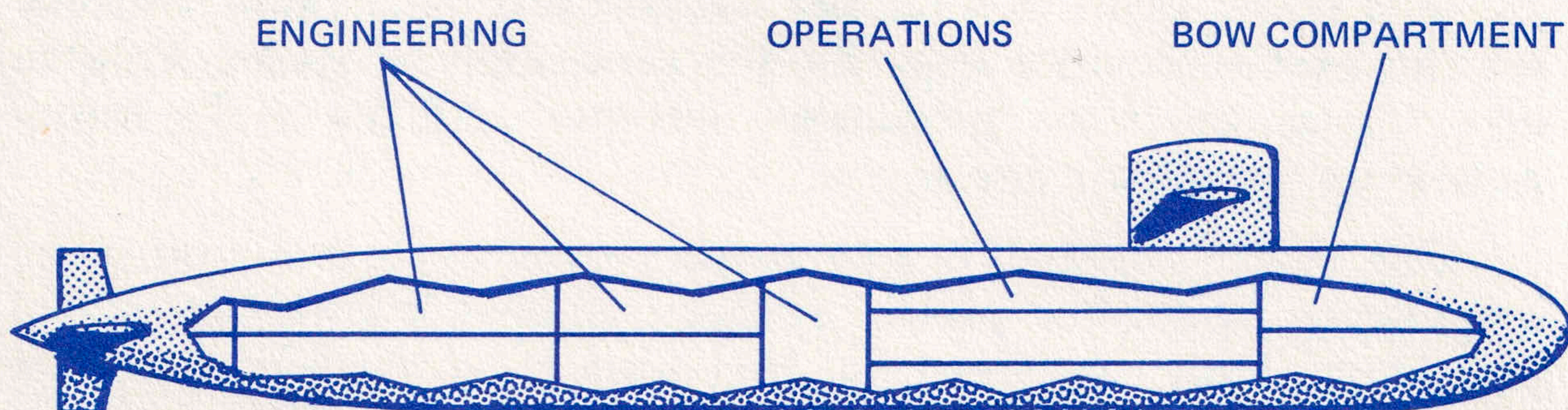
BATFISH commenced reactivation overhaul in the Mare Island Naval Shipyard 2 January 1952 and recommissioned 7 March 1952, Lieutenant Commander Robert J. Jackson, commanding. She conducted readiness training out of San Diego until 21 April, then set course by way of the Panama Canal to base at Key West, Florida. She reached her new base 9 May and became a unit of Submarine Division 122, U.S. Atlantic Fleet. The remainder of her commissioned career was spent in training operations ranging from Key West into the Caribbean Sea and along the eastern seaboard.

BATFISH departed Key West 3 May 1957 and entered the Charleston Naval Shipyard 5 May for inactivation. She decommissioned 4 August 1958 and was assigned to the Charleston Group, U.S. Atlantic Reserve Fleet. In the summer of 1959 she was assigned as a naval reserve training ship at New Orleans, Louisiana. During this service, 6 November 1962, she was redesignated an auxiliary submarine (AGSS-310). She continued to serve at New Orleans until her name was struck from the Naval Vessel Register 1 November 1969.

The fleet submarine was donated to the State of Oklahoma to serve as a World War II Memorial to state veterans of that war. BATFISH is now located near Muskogee, Oklahoma, a developing port on the new Arkansas River Waterway. The memorial was created by an Oklahoma Memorial Advisory Board.







## COMPARTMENTATION

**ENGINEERING** — These spaces provide room for the pressurized-water type nuclear reactor, the steam turbine-generators which produce electrical power, and the propulsion turbines which drive the ship. The propulsion turbines are accompanied by reduction gears which transmit the power to the shaft, ultimately turning the screw to give motion to the ship. The engineering spaces are filled with complex electrical and fluid systems which support the main and auxiliary components of the propulsion plant.

**OPERATIONS** — This area, between the bow compartment and engineering spaces, provides space for navigational equipments, ship control, and various habitability areas. The radio room, sonar room, officers' staterooms, wardroom, and ship's offices are also located here. The lower level of the operations compartment is primarily occupied by the torpedo room.

**BOW COMPARTMENT** — This portion of the ship is primarily a habitability space and includes most of the crew's berthing. Quarters for the chief petty officers are found here, and a small machinery space houses the auxiliary diesel generator.



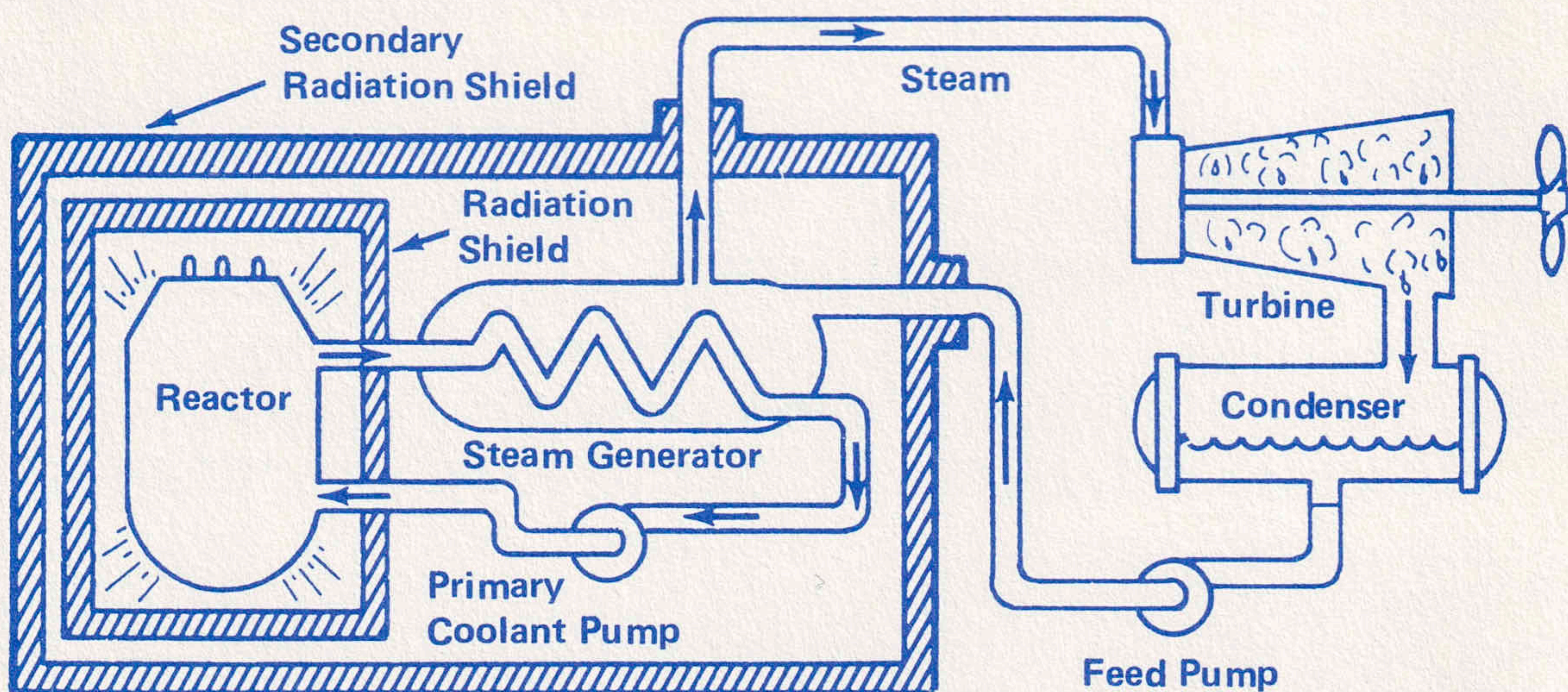
## THE POWER PLANT

The power plant of a nuclear submarine is based upon a nuclear reactor which provides heat for the generation of steam. This, in turn, drives the main propulsion turbines and the ship's turbo-generators for electric power.

The primary system is a circulating water cycle and consists of the reactor, loops for piping, primary coolant pumps and steam generators. Heat produced in the reactor by nuclear fission is transferred to the circulating primary coolant water. This water is then pumped through the steam generator and back into the reactor by the primary coolant pumps for reheating in the next cycle.

In the steam generator, the heat of the pressurized water is transferred to a secondary system to boil water into steam. This secondary system is isolated from the primary system.

From the steam generators, steam flows to the engine room where it drives the turbo-generators, which supply the ship with electricity, and the main propulsion turbines, which drive the propeller. After passing through the turbines, the steam is condensed and the water is fed back to the steam-generators by the feed pumps.



There is no step in the generation of this power which requires the presence of air or oxygen. This fact alone allows the ship to operate completely independent from the earth's atmosphere for extended periods of time.

During the operation of the nuclear power plant, high levels of radiation exist around the reactor and personnel are not permitted to enter the reactor compartment. Heavy shielding protects the crew so that the crew member receives less radiation on submerged patrol than he would receive from natural sources ashore.



## GENERAL INFORMATION

### RADIATION SAFETY

All radiation warning signs and markers are to be observed. These consist of magenta and yellow signs, ropes or ribbons. Only authorized persons are allowed in areas marked "Radiation Area". No loitering is allowed.

### MEDICAL FACILITIES

The Hospital Corpsman should be consulted for any illness or injury that may occur during the cruise. It is recommended that those personnel susceptible to motion sickness obtain medication prior to getting underway. However, medication for this purpose will be available throughout the cruise.

### CAUTION

Do not attempt to operate any equipment, twist knobs, flip switches, or turn any valves. There are members of the crew on watch in every compartment to assist you. Please observe all warning signs.

### EMERGENCIES

In the event of an emergency, stand fast but clear of all passageways and watertight doors so that ship's personnel may be free to proceed to the scene. The crewman in charge of the compartment will direct your movements and keep you informed as soon as he is able. If you are requested to clear an area please do so expeditiously and quietly.



Should you see water leaking or smell smoke or have any question concerning the safety of the ship, please call it to the attention of one of the crewmen who will take proper action.

## ACCESS AND CONGESTION

Vistors are always welcome in any authorized space when the operations of the ship permit. At most operating and control stations the space is very limited, however. As a result, it is necessary for any person not on watch to have permission of proper authority before being allowed in the space. This regulation is in effect at all times and for all persons embarked, including members of the ship's company. You are asked to conscientiously abide by these regulations.

## ACCESS TO BRIDGE

The bridge area is very small, with room for only two men. Guests cannot be accommodated in order to permit the watchstanders sufficient room to carry out their duties.

## SECURITY

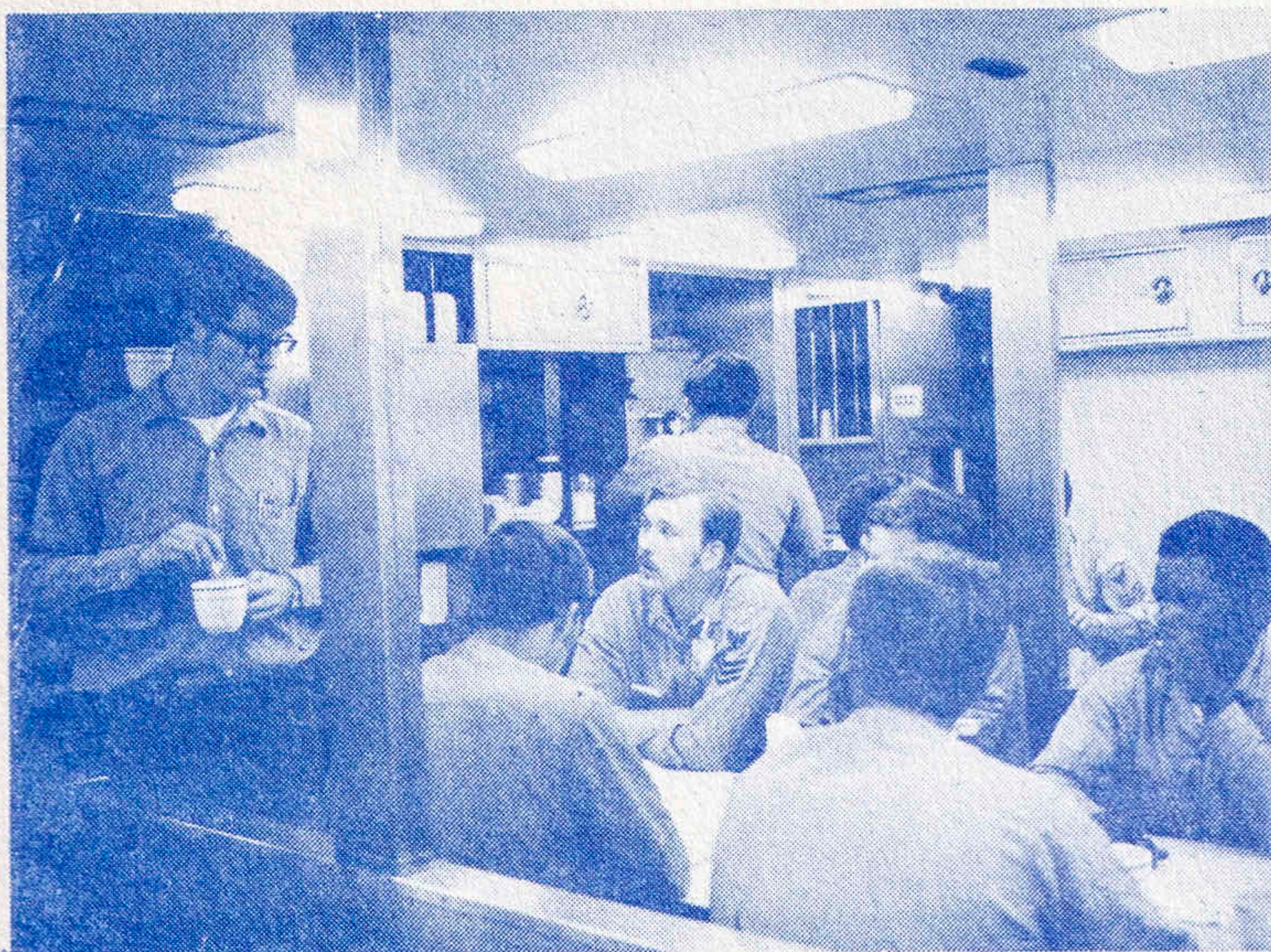
Most features of the ship are of a classified nature. In addition, Sonar Control, Radio/ESM Room, Sonar Equipment Space, Nucleonics Laboratory and the entire ship aft of the Operations Compartment are security areas. Only authorized personnel are permitted in these spaces. Information concerning speed, depth, weapons, fire control, sonar, ESM, and the propulsion plant are classified.

## IMPROVED HABITABILITY

The ship is completely air-conditioned and has equipment for revitalizing the air. Other facilities include a crew's lounge, library, laundry, hi-fi stereo systems, soft drink and ice cream machines.



*A submarine is not only a place of work for the members of the crew; it is also a home with excellent food, deep friendships and filled with the immeasurable pride of submariners.*





*While at sea there always must be those who maintain the vigil of the watch to ensure the fulfilling of the ship's vital mission and the safety of the ship and the crew.*

