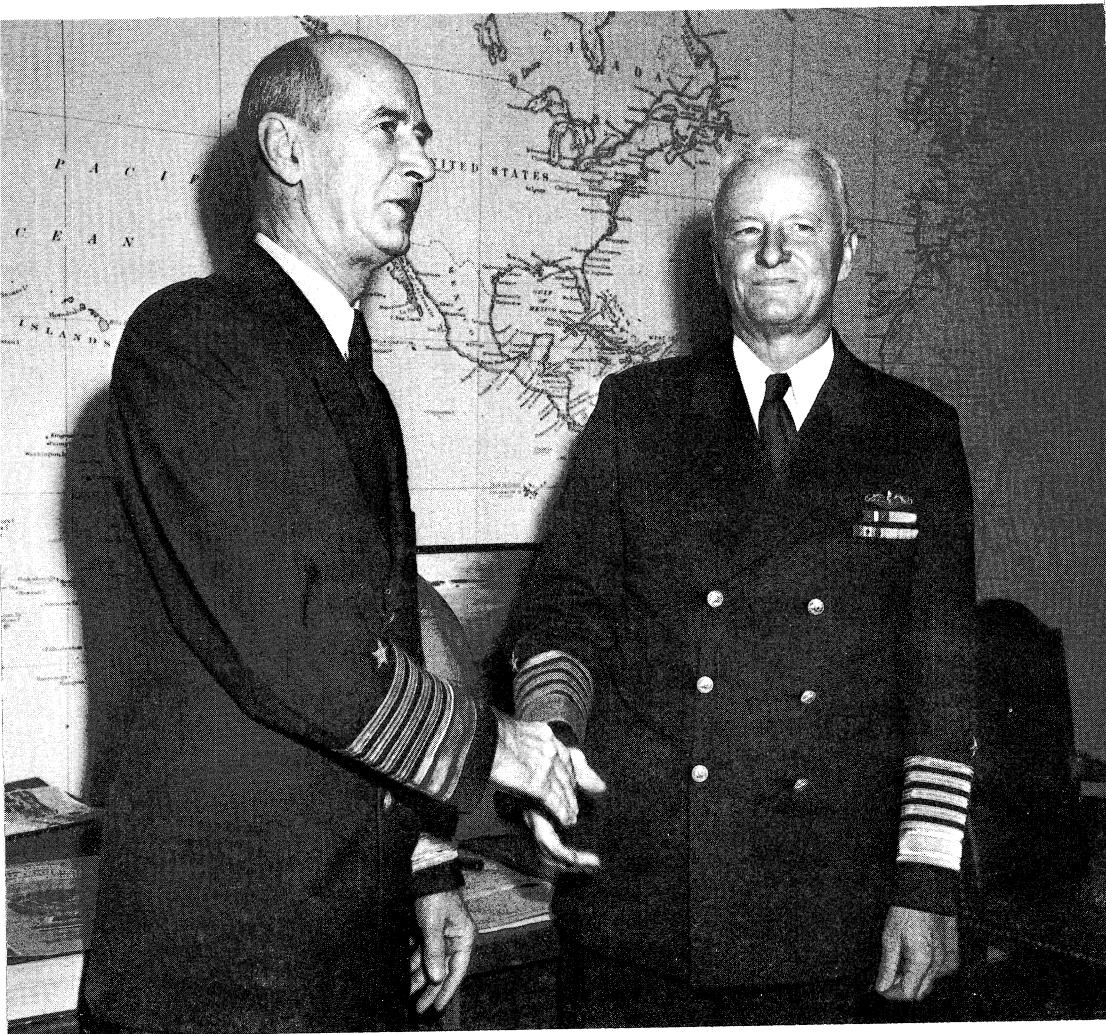


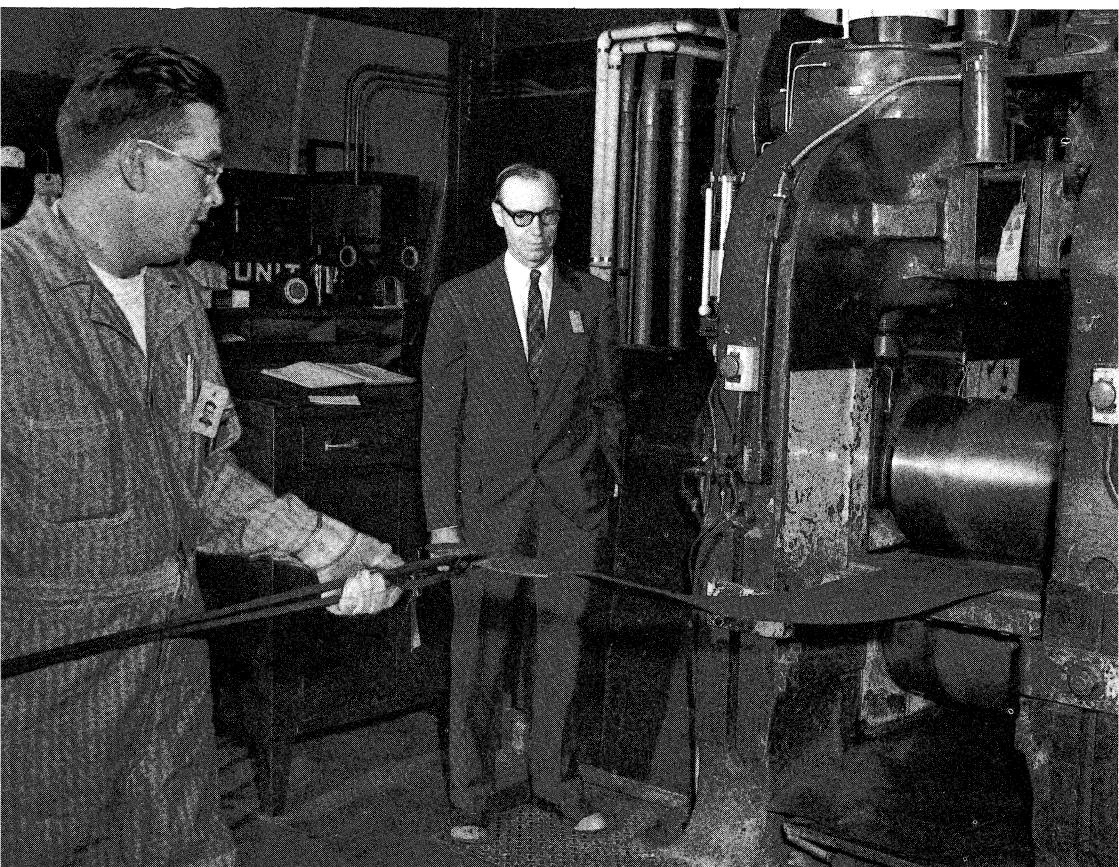
1. Fleet Admiral Ernest J. King congratulates Fleet Admiral Chester W. Nimitz after the announcement on November 21, 1945, that Nimitz would succeed King as Chief of Naval Operations.
U.S. Navy



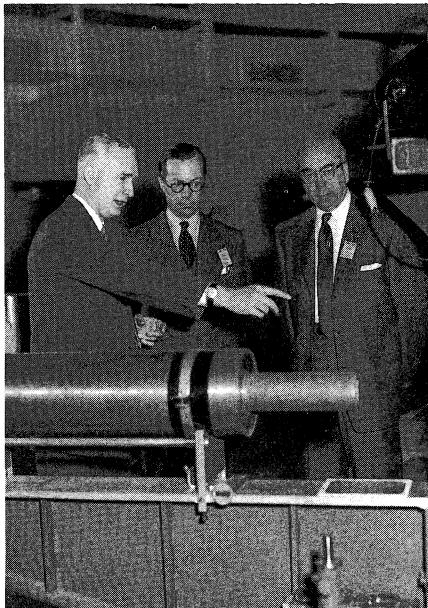
2. Rickover with Commission and General Electric officials at Schenectady, probably in December 1946. Left to right: C. Guy Suits, John J. Rigley, Hyman G. Rickover, Leonard E. Johnston, and Harry E. Winne.



3. Lawrence R. Hafstad, director of the Commission's division of reactor development from 1949 until 1955, observes shop procedures at Argonne National Laboratory on December 9, 1954.

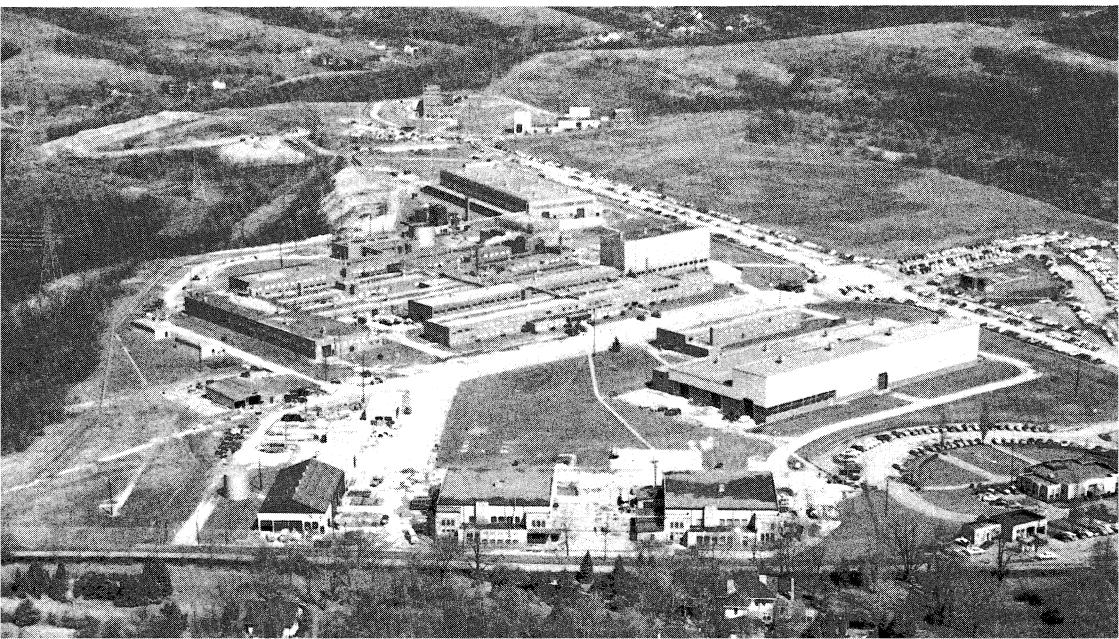


4. Walter H. Zinn (left), the director of the Commission's Argonne National Laboratory, explains research apparatus to Sir Edwin N. Plowden, chairman, United Kingdom Atomic Energy Authority, and Chairman Lewis L. Strauss at the laboratory in May 1956.



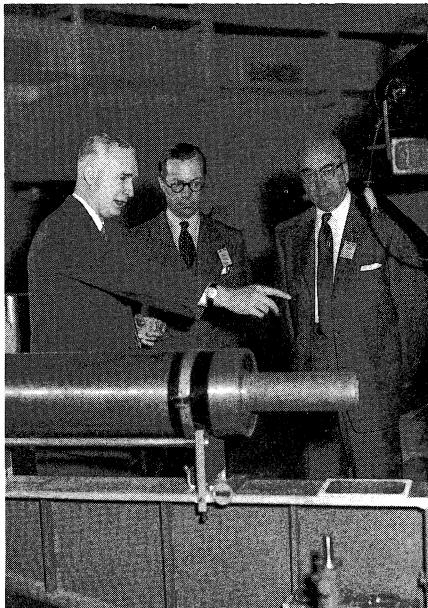
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5. The Bettis Atomic Power Laboratory at West Mifflin, Pennsylvania, as it appeared in 1956. Built for the Commission by Westinghouse, Bettis developed the pressurized-water reactor design for the Navy.



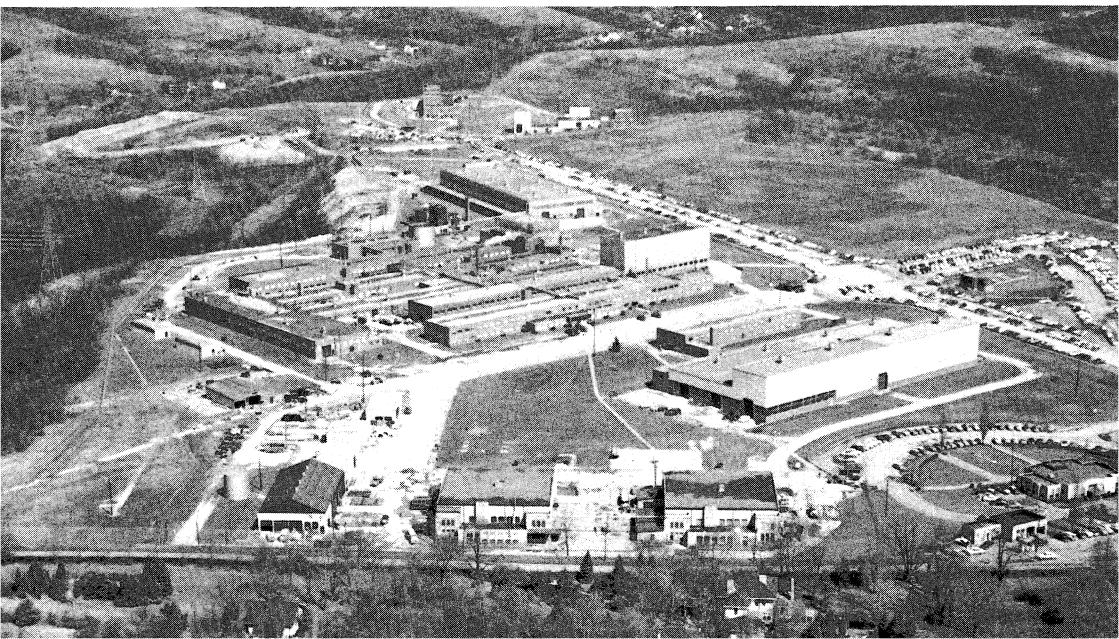
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4. Walter H. Zinn (left), the director of the Commission's Argonne National Laboratory, explains research apparatus to Sir Edwin N. Plowden, chairman, United Kingdom Atomic Energy Authority, and Chairman Lewis L. Strauss at the laboratory in May 1956.



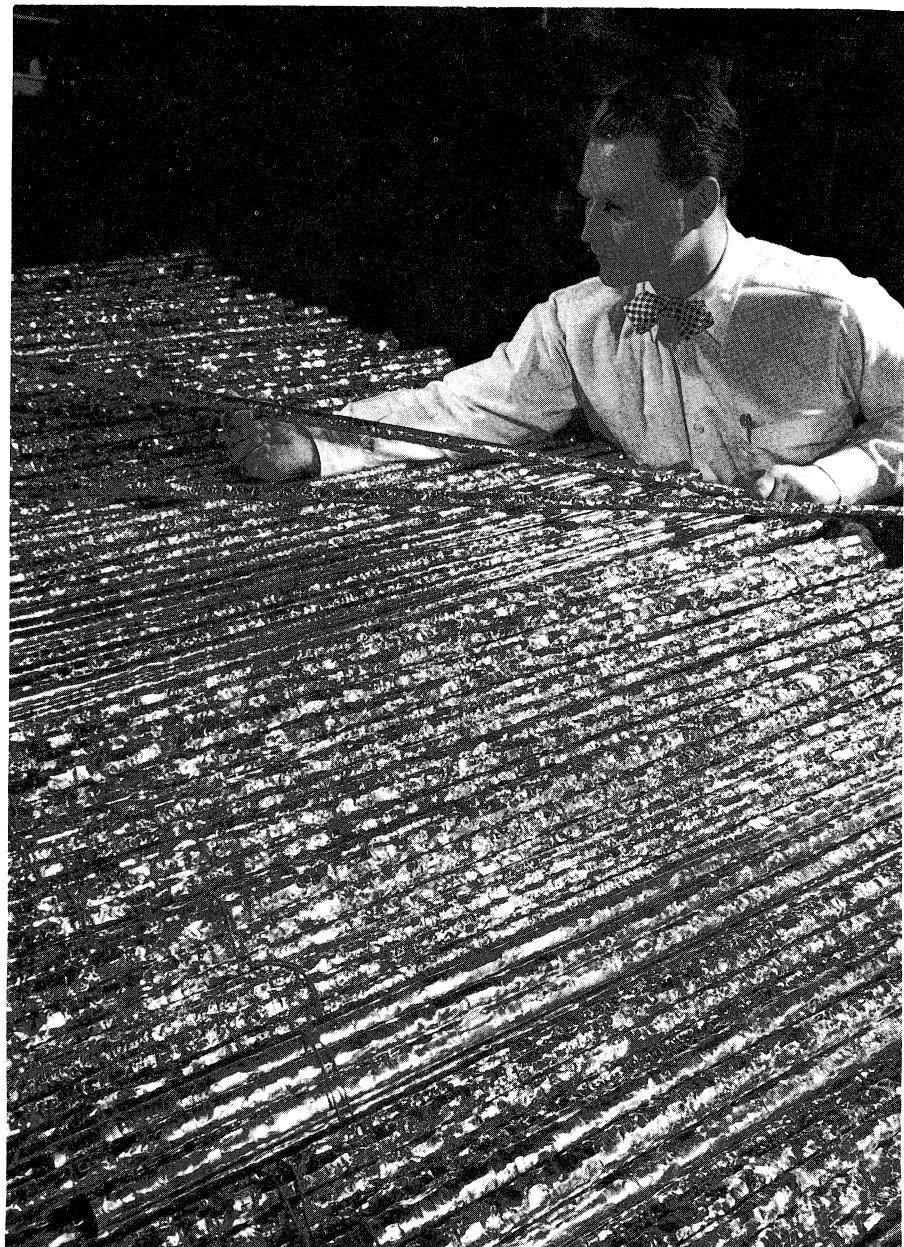
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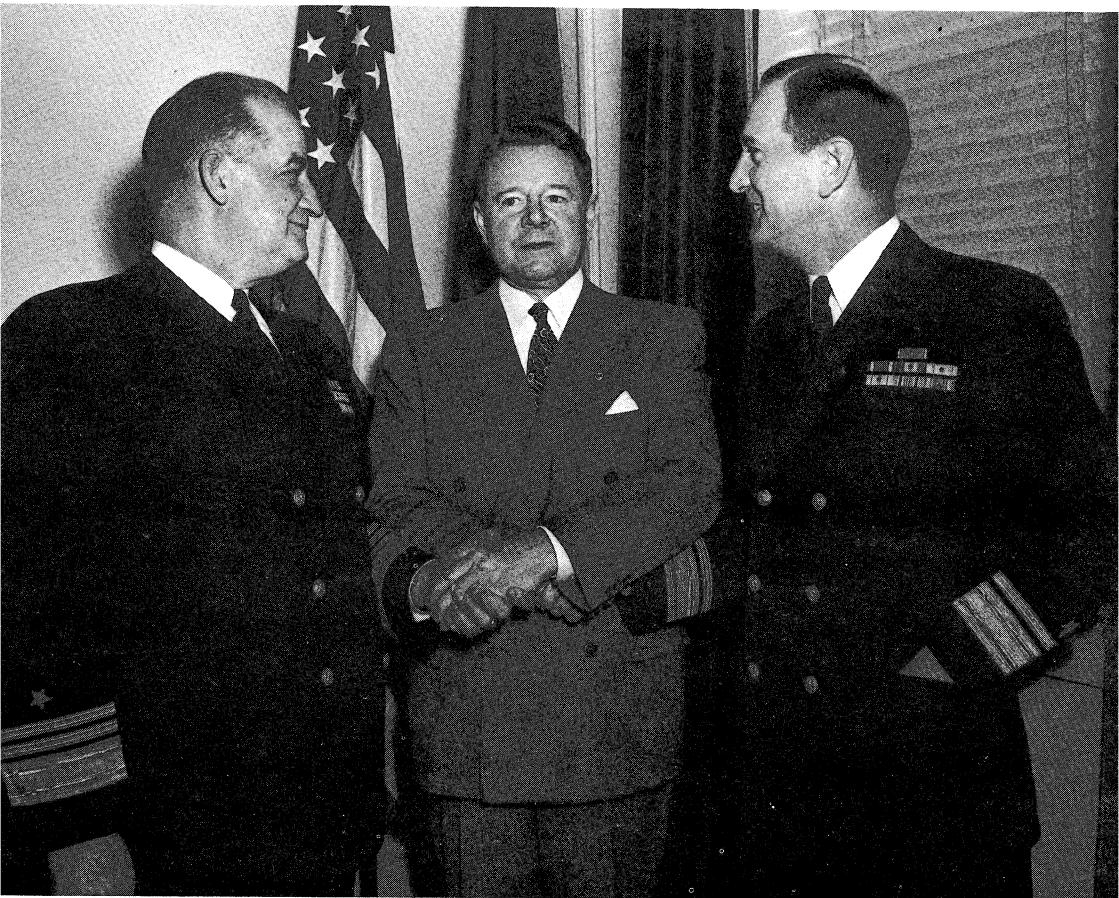


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6. Alexander Squire, a Bettis engineer who played a major role in the first mass production of zirconium metal, examines some of the crystal bar zirconium produced for the Mark I reactor.



7. Rear Admiral David H. Clark (right) succeeds Vice Admiral Earle W. Mills in March 1949 as Chief of the Bureau of Ships. Secretary of the Navy John L. Sullivan is between the two officers.
U.S. Navy

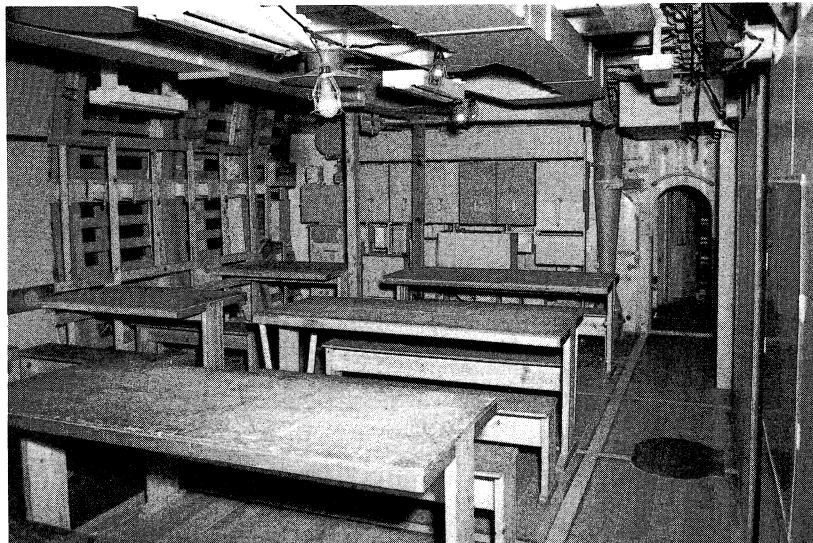


8. The naval reactor installation at the National Reactor Testing Station in Idaho in December 1953. The submarine thermal reactor, Mark I, is in the large building.

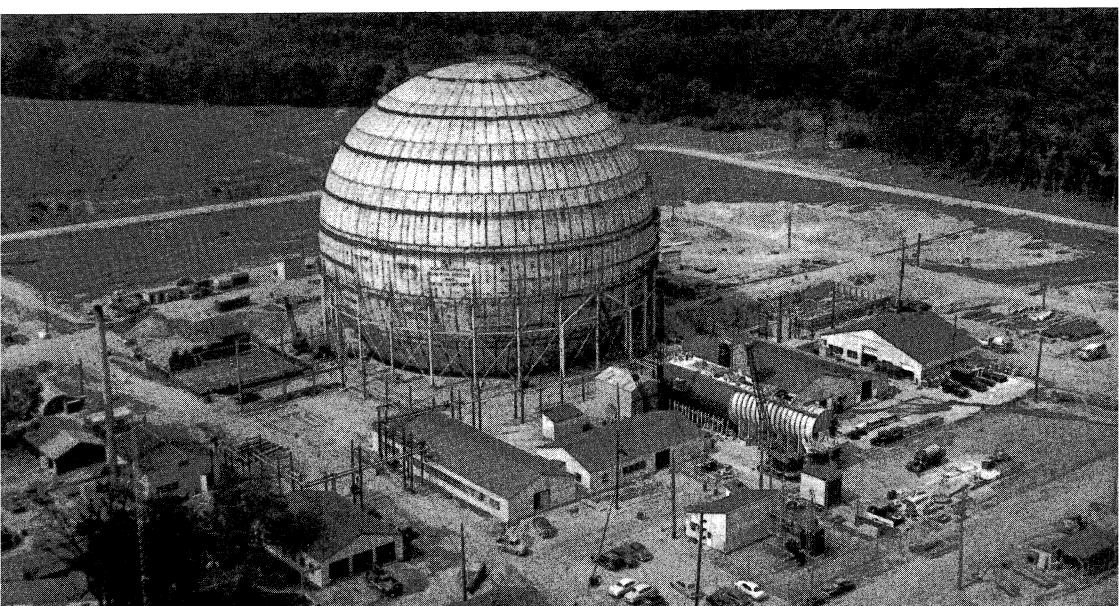


9. A full-scale wood and cardboard mock-up of the crew's quarters aboard the *Nautilus*. Similar mock-ups of the machinery areas were used to make certain that components were accessible for maintenance and repair. They also helped to train workmen in installation procedures.

10. The West Milton, New York, site in the summer of 1953. The spherical containment vessel, 225 feet high, dominates the site. The hull section for the submarine intermediate reactor, Mark A, is being assembled outside the sphere in the right foreground.



9



10

11. President Truman about to place his initials on the keel plate of the *Nautilus* on June 14, 1952. Behind the president to the left in the light suit is John Jay Hopkins. To the right behind the president is O. Pomeroy Robinson. Behind Hopkins are Mrs. Rickover and the Rickovers' son, Robert. Captain Rickover is partially obscured behind the two naval officers in the center of the photograph.

12. Westinghouse and Electric Boat officials at the *Nautilus* keel-laying ceremony. Left to right: Latham E. Osborne, executive vice-president of Westinghouse; John Jay Hopkins, president of General Dynamics; Gwilym A. Price, president of Westinghouse; Charles H. Weaver, manager of the Westinghouse Atomic Power Division; O. Pomeroy Robinson, general manager of Electric Boat.

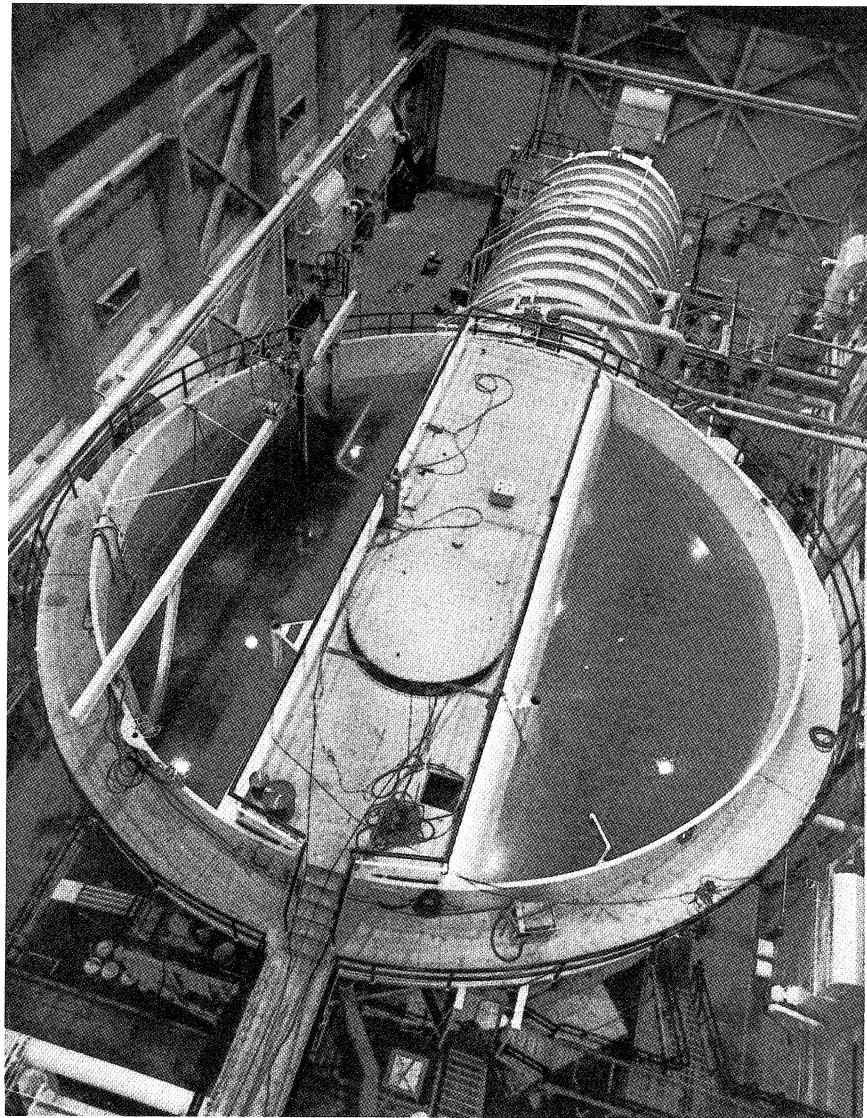


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13. The submarine thermal reactor, Mark I, at the Idaho test site as it appeared in 1954. The reactor is located within the portion of the hull surrounded by the water tank.

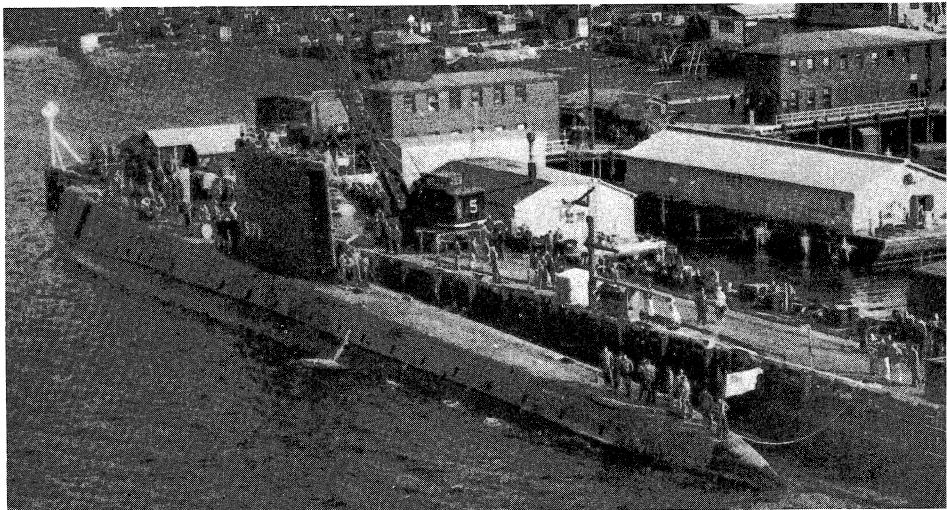
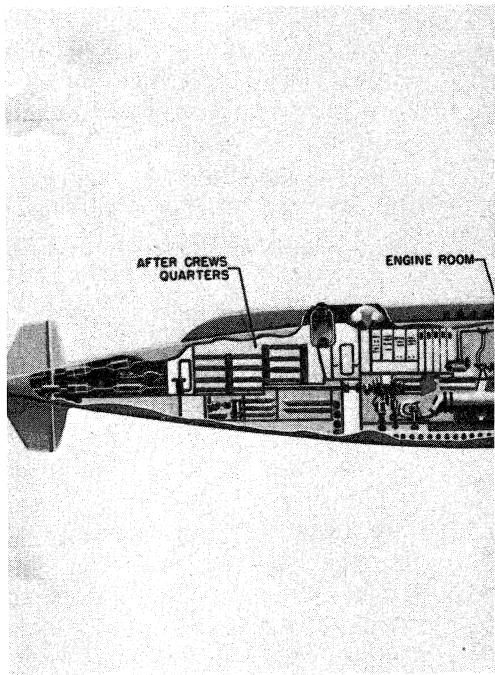


14. The *Nautilus* (SSN-571) was launched at the Electric Boat yard, Groton, Connecticut, on January 21, 1954. The ship was less than a year from sea trials.

14



15. The world's first nuclear-powered ship ready for initial sea trials. The *Nautilus* was about to leave her dock at Groton on January 17, 1955.



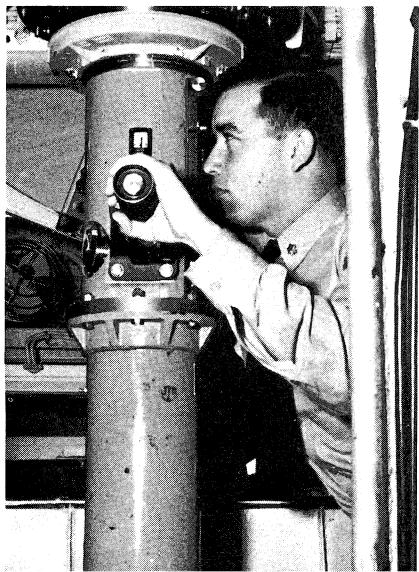
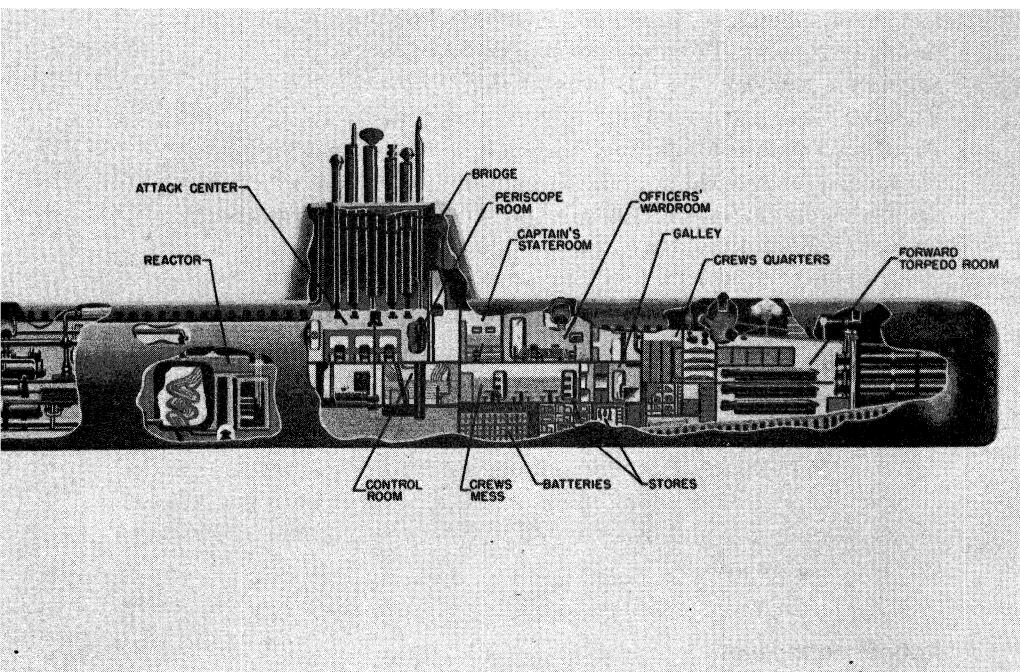
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16. A cut-away drawing showing the main compartments of the *Nautilus*. The arrangement of the reactor compartment is only schematic.

U.S. Navy

17. Commander Eugene P. Wilkinson, the first captain of the *Nautilus*, at the periscope.

16



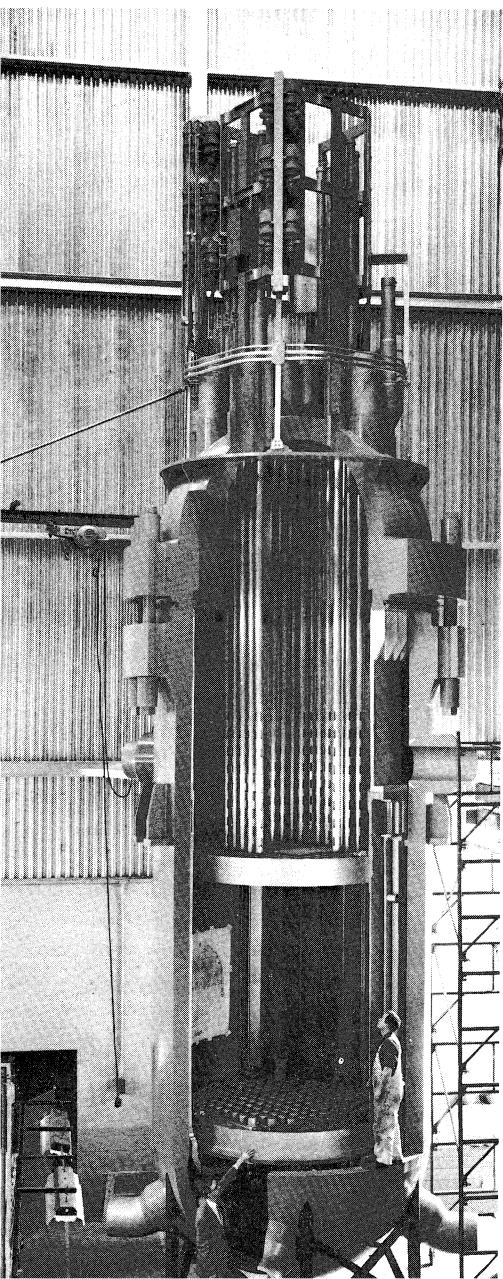
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18. Members of the Joint Committee on Atomic Energy aboard the *Nautilus*, March 20, 1955. Seated around the wardroom table clockwise from the foreground are: Representative Carl Hinshaw, Senator Bourke B. Hickenlooper, Senator Albert Gore, Representative Carl T. Durham, Senator Clinton P. Anderson, Senator William F. Knowland, Representative James E. Van

Zandt, Representative James T. Patterson, Senator John O. Pastore, Representative W. Sterling Cole. Standing, left to right: Joint Committee staff members Corbin A. Allardice, Walter A. Hamilton, J. Kenneth Mansfield, Edward L. Heller, Representative Herbert C. Bonner, Admiral Rickover, Rear Admiral Frank T. Watkins, Commander Eugene P. Wilkinson.—U.S. Navy



19. A full-scale model of the nation's first civilian power reactor at Shippingport, Pennsylvania. The pressure vessel itself was almost 35 feet high, more than 10 feet in diameter, and weighed 264 tons.



20. President Eisenhower in Denver, Colorado, uses a neutron source in a "radioactive wand" to activate a bulldozer at Shippingport, Pennsylvania, as part of the groundbreaking ceremonies for the pressurized-water reactor plant on September 6, 1954. The administration considered the Shippingport project a key element in the Atoms-for-Peace program.

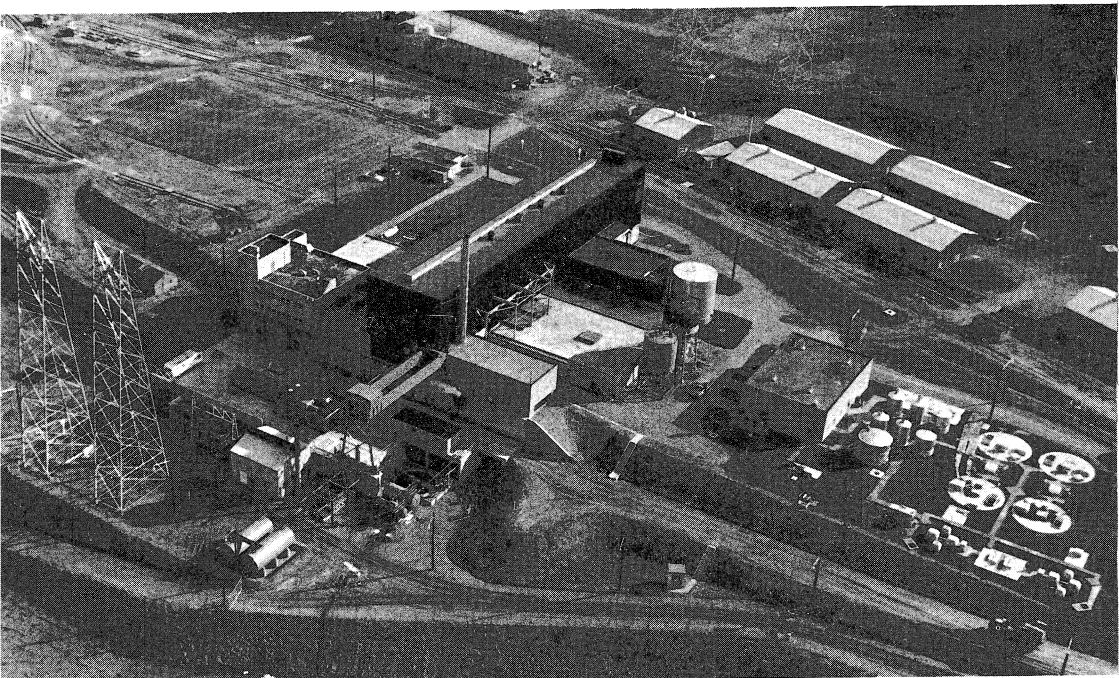


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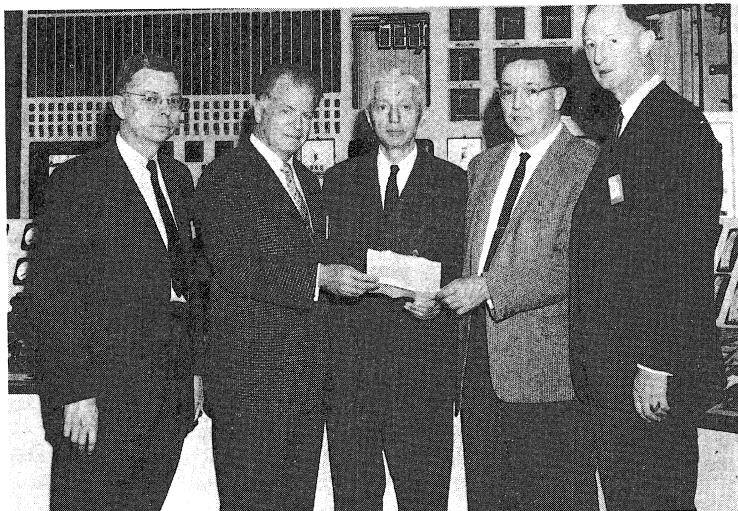
21. An aerial view of the Shippingport Atomic Power Station on the Ohio River northwest of Pittsburgh. The station, first operated on December 23, 1957, was the first full-scale nuclear power plant in the United States.

22. Central figures in the Shippingport project standing in front of the reactor control panel, probably early in 1958.

Left to right: Lawton D. Geiger, manager of the Commission's Pittsburgh office; Charles H. Weaver, Westinghouse vice-president for atomic power development; Rickover; James T. Ramey, executive director of the Joint Committee on Atomic Energy; John W. Simpson, manager, Bettis Atomic Power Division.



21



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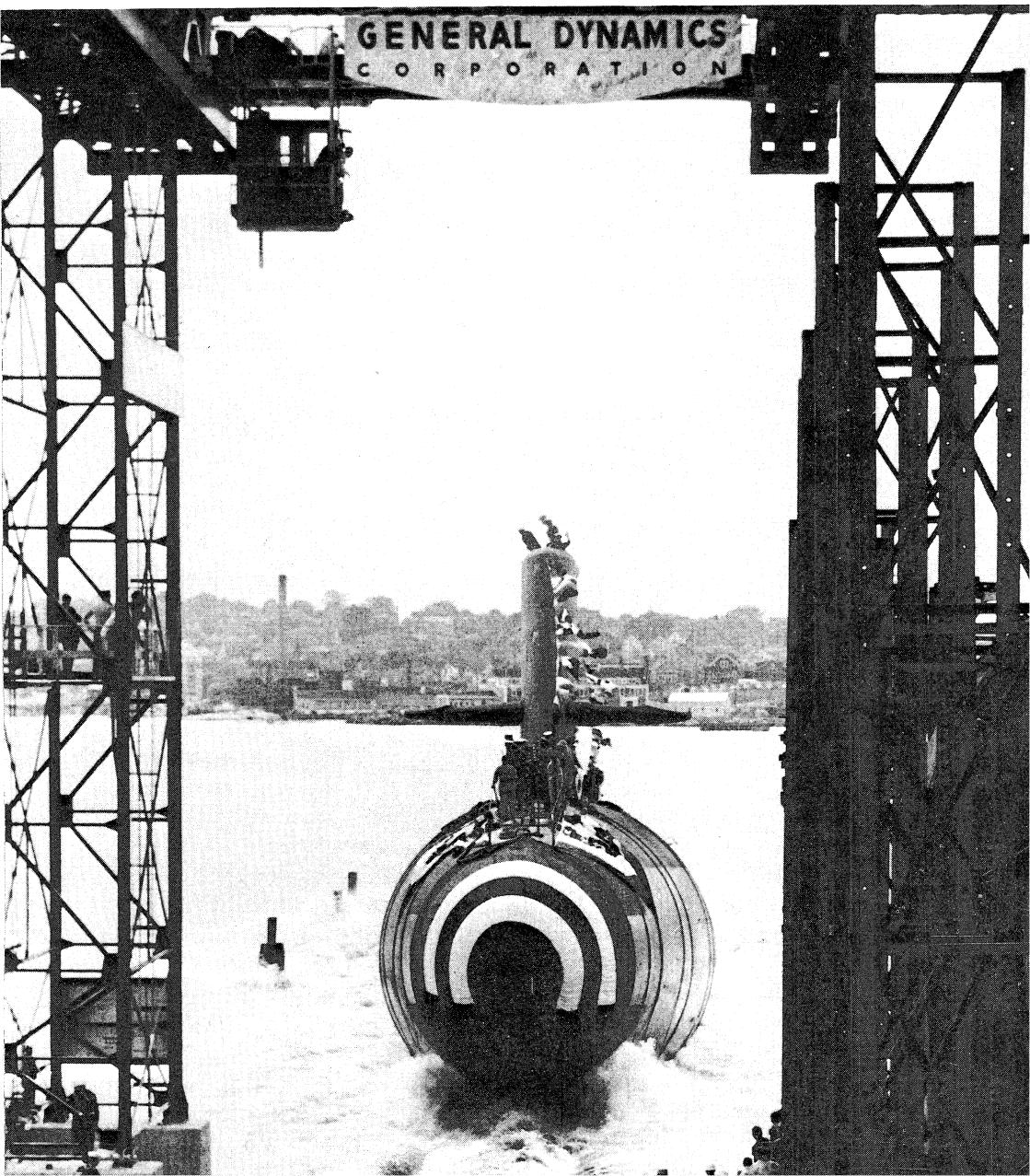
23. Rickover and some of his senior staff in the summer of 1958. Standing at rear: Willis C. Barnes; from left to right around the table: Robert Panoff, Howard K. Marks, Milton Shaw, I. Harry Mandil, Jack C. Grigg, James M. Dunford, and David T. Leighton.

Paul Schutzer, *Life*



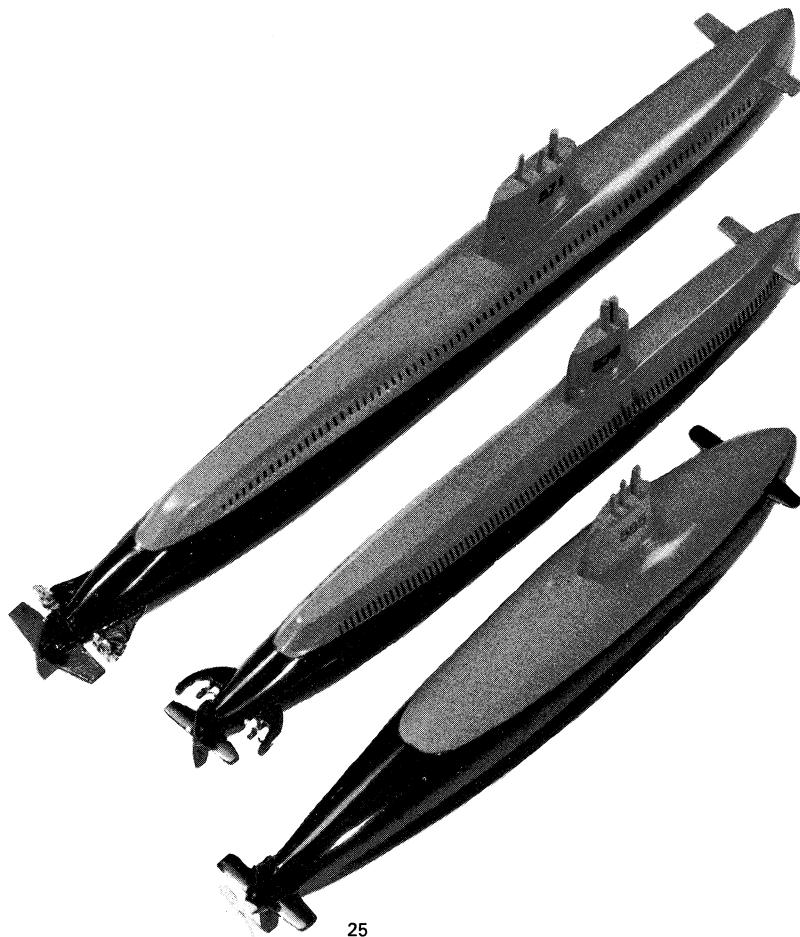
24. The *Skipjack* (SSN-585), the first of a new class of submarines using the S5W reactor plant and the streamlined hull, is launched at the Electric Boat yard at Groton, Connecticut, on May 26, 1958.

24

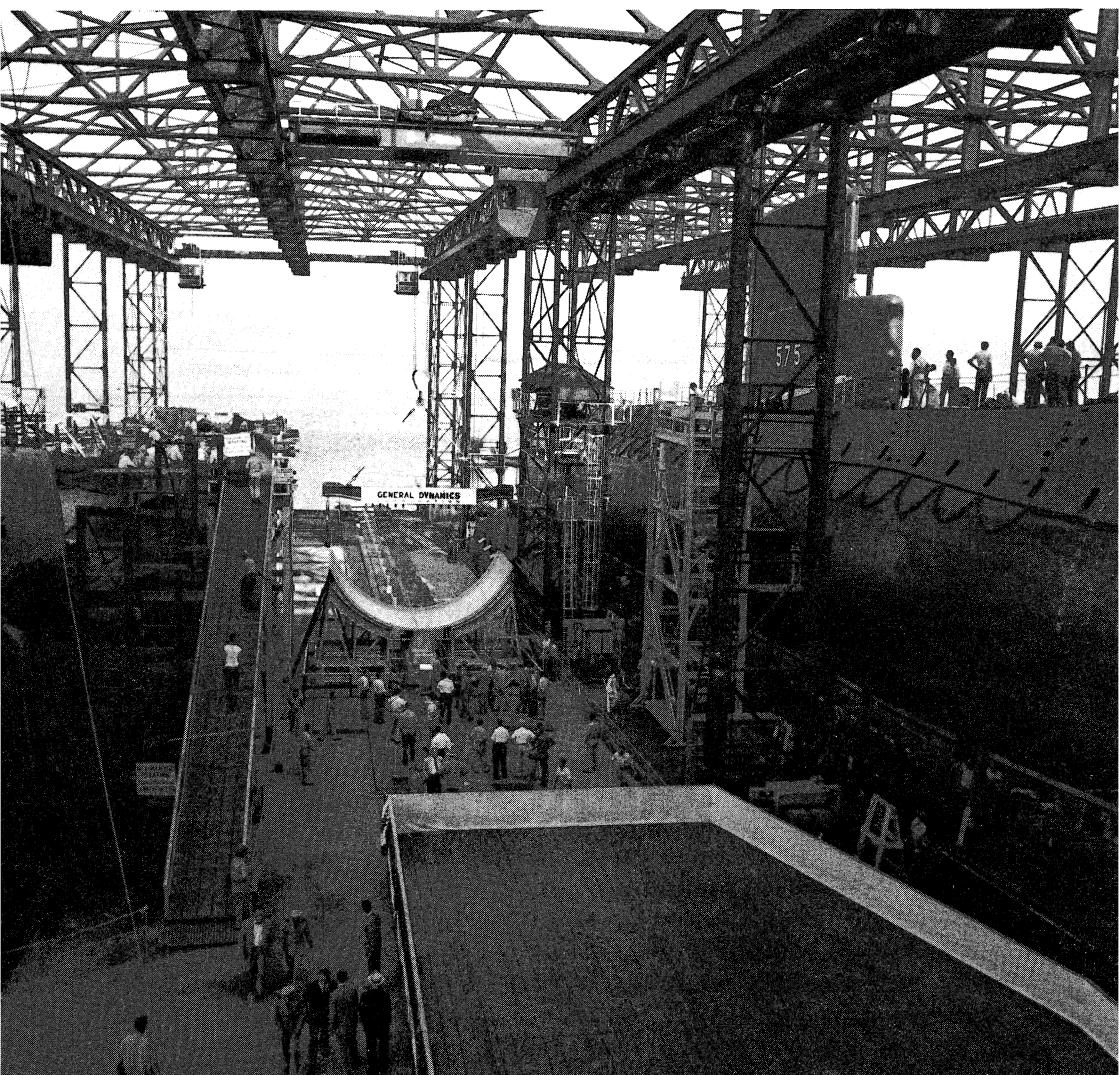


25. From the *Nautilus* to the *Skipjack*.
Scale models showing the evolution of
the nuclear-powered attack submarine:
The *Nautilus* (SSN-571), the first nuclear
submarine; the *Skate* (SSN-578), in
which the Navy incorporated nuclear

propulsion in a hull about the size and
configuration of a conventional
submarine; and the *Skipjack* (SSN-585),
in which nuclear propulsion and the
high-speed hull form were combined to
give maximum underwater performance.



26. Preparations at 7:30 A.M., July 21, 1955, for a dual ceremony at Electric Boat. Keel laying of the *Skate* (SSN-578) is to take place in the building way at the center, and the *Seawolf* (SSN-575) is to be launched at the right.



27. The Electric Boat yard at Groton, Connecticut, in 1958. Machine shops and building sheds are along the waterfront. A submarine under construction can be seen in the nearest building shed.



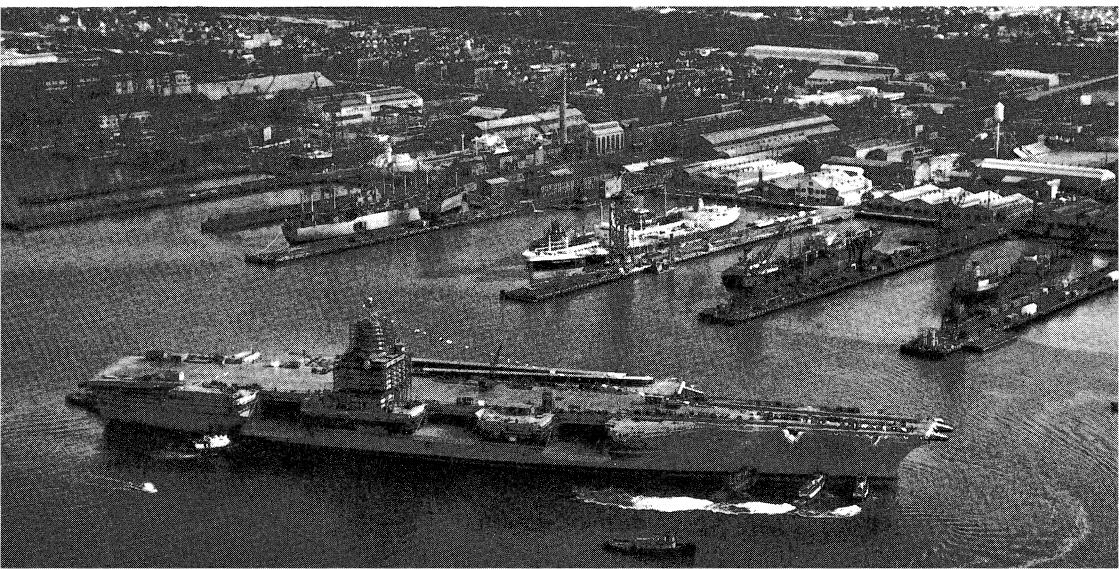
28. Commander James B. Osborn and Rear Admiral William F. Raborn inspect a missile hatch aboard the *Polaris* submarine *George Washington* (SSBN-598).

29. The aircraft carrier *Enterprise* (CVAN-65) after launching on September 24, 1960. The ship is being towed to the dock where she will spend another year being completed. In the background is the yard of the Newport News Shipbuilding and Dry Dock Company. U.S. Navy

28



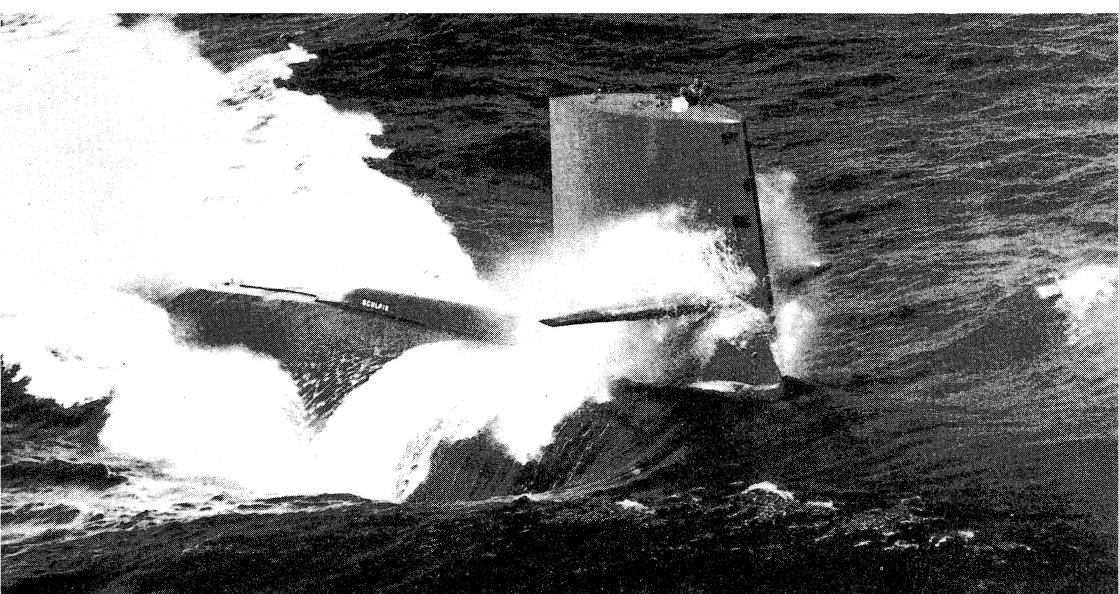
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31. The *Skate* (SSN-578) surfaced at the North Pole, March 17, 1959. The *Skate*, built by Electric Boat and driven by the S3W submarine fleet reactor, had voyaged beneath the Pole in August 1958.

31

32. The *Sculpin* (SSN-590) in a high-speed surface run in May 1961. The size of the bow wave indicates the power of the nuclear propulsion system.
U.S. Navy

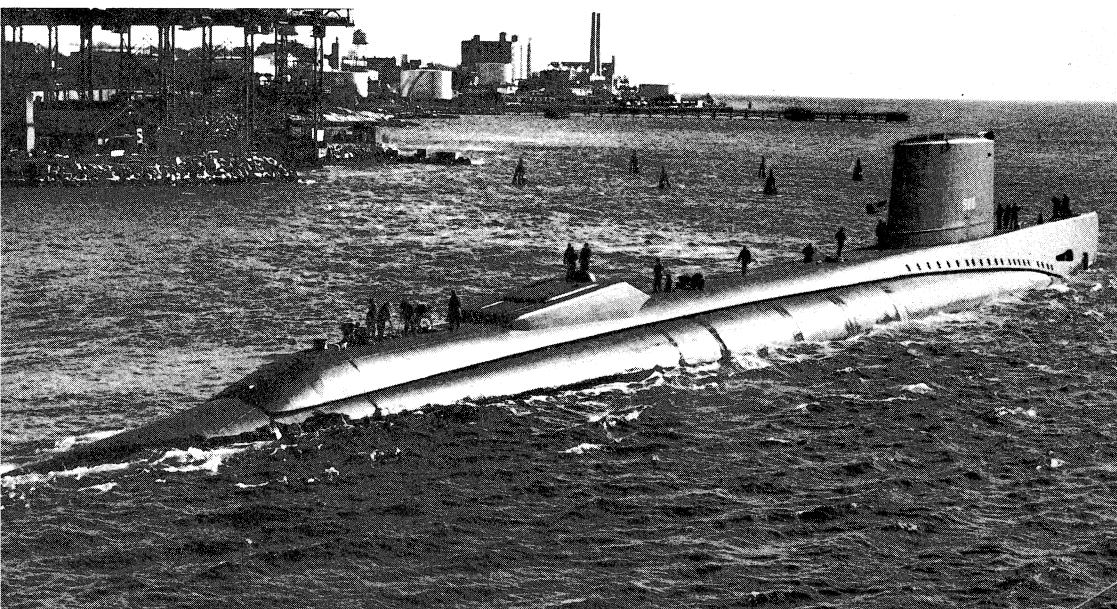


32

33. The *Triton* (SSRN-586) leaving New London on February 16, 1960, for a trip around the world. Driven by two S4G reactors, the largest submarine ever built circumnavigated the globe, submerged, in 83 days and 10 hours.

33

34. The *Polaris* missile submarine *Ethan Allen* (SSBN-608), photographed on the surface on August 20, 1961. The hydrodynamic shape of the hull was modified in Polaris submarines to accommodate the missile tubes aft of the sail. The *Ethan Allen* was the lead ship in the second class of *Polaris* submarines, the first to be designed from the keel up for missile launching.—U.S. Navy



35. Nuclear Surface Fleet, May 1964.
From left to right: the guided missile
cruiser *Long Beach* (CGN-9), the
aircraft carrier *Enterprise* (CVAN-65),
and the guided-missile frigate *Bainbridge*
(DLGN-25).
U.S. Navy



36. The nuclear-powered aircraft carrier *Enterprise* (CVAN-65) in action. The tremendous power of her eight-reactor propulsion system is dramatically demonstrated in this high-speed turn.
U.S. Navy

