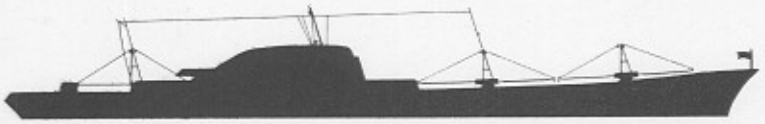

TECHNICAL
PRESS INFORMATION
N.S. SAVANNAH

COMPILED FOR THE
U.S. ATOMIC ENERGY COMMISSION
U.S. DEPARTMENT OF COMMERCE
MARITIME ADMINISTRATION

BY NEW YORK SHIPBUILDING CORPORATION, CAMDEN, NEW JERSEY

PART I

BACKGROUND INFORMATION

One hundred and forty years ago, on May 22, 1819, a 320-ton ship started an epoch-marking voyage from Savannah, Georgia to Liverpool, England. She was the SAVANNAH, the first vessel to use steam on a transatlantic crossing. The 29-day, 11 hour voyage was successful even though the little craft could carry only enough coal and wood to permit about 89 hours of steaming spread over at least seven days.

As the SAVANNAH ushered in the Steam Age in ocean travel, it is fitting that another SAVANNAH should usher in the Atomic Age. After President Eisenhower signed the bill authorizing the construction of the first nuclear-powered merchant ship, he accepted the suggestion of American shipping men and named her the "N.S. SAVANNAH." This was fitting, since the new ship which will bear the designation "N.S." (for Nuclear Ship) is another first, as important as was the little SAVANNAH which opened a new era 140 years ago.

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The project to build the N.S. SAVANNAH was undertaken in keeping with the policy of the President and the Congress to foster and develop the American Merchant Marine and to demonstrate to the world the intent of the United States to employ the power of the atom for peaceful, productive purposes.

The development of the new nuclear-powered cargo-passenger ship SAVANNAH, is the joint responsibility of the Maritime Administration of the U.S. Department of Commerce and the U.S. Atomic Energy Commission. The combined effort is being carried on through a joint group known as the Nuclear Projects Office in the Maritime Administration, and as the Maritime Reactors Branch in the Atomic Energy Commission. The vessel was designed by George G. Sharp, Inc., and is now under construction at New York Shipbuilding Corporation at Camden, New Jersey. The Babcock and Wilcox Company holds the prime contract for the propulsion machinery with DeLeval Steam Turbine Company as subcontractor for the turbines, reduction gears, and other heavy machinery.

Building of a nuclear-powered merchant vessel was first proposed by President Eisenhower in a speech in New York on April 25, 1955. Construction was authorized by Public Law 848, July 30, 1956, (Sec. 716, Merchant Marine Act of 1936, as amended) with the vessel to be built by the U. S. Maritime Administration and the U. S. Atomic Energy Commission, jointly

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Under Sec. 715 of the Merchant Marine Act of 1936, as amended, the vessel is to be operated by the Maritime Administration. States Marine Corporation of Delaware will operate the ship as General Agent for the Maritime Administration.

The contract with the Babcock and Wilcox Company for development and fabrication of the nuclear propulsion system was signed April 4, 1957. The contract for construction of the SAVANNAH was signed with the New York Shipbuilding Corporation, Camden, New Jersey, on November 15, 1957. The keel for the SAVANNAH was laid on National Maritime Day, May 22, 1958, and the ship will be launched on July 21, 1959, with Mrs. Dwight D. Eisenhower as sponsor.

Construction of the vessel will be completed and the SAVANNAH ready for loading of her nuclear fuel by early 1960. It is expected that the SAVANNAH will undergo extensive testing during the Spring of 1960, and that she will be ready for unrestricted operation by summer 1960.

From its inception, it has been acknowledged that the SAVANNAH itself will not attain economically competitive operation; nor is she intended as a prototype. Rather, it has been planned to utilize this "first generation" nuclear-powered merchant vessel to develop practical construction and operating technology and to employ this information in evaluating and designing "second and third generation" nuclear powered ships which can attain competitive performance in free enterprise.

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It is planned that the SAVANNAH will be a test ship. Many special features, such as provision for extensive remote operation of components and the possibility of rapid maneuvering rates, which are not essential for proper performance of this ship-type have been incorporated for evaluation in future designs. During operation of the SAVANNAH, it is fully expected that components, and even entire plant systems, will be changed, when it is indicated that significant improvments can be made.

Finally, the SAVANNAH has five important missions:

(1) To demonstrate to the world the employment of nuclear power in an instrument of peace for the benefit of mankind,

(2) To bring the power of the atom into the market places of the world in peaceful trade and commerce,

(3) To enlighten the public to the fact that nuclear-powered ships are entirely dependable and safe,

(4) To stimulate early solutions to such problems as international liability and indemnification, and, win for nuclear ships, acceptance in the world's ports,

(5) To give the Maritime Administration and the Atomic Energy Commission the opportunity for prudently assessing the possible contributions of atomic power to the progress of the American Merchant Marine in providing shipping services on routes essential for maintaining the flow of the foreign commerce of the United States.

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The SAVANNAH's rather elaborate provisions for shielding, reactor containment, ship structural integrity, safe storage of all wastes, and the continuous monitoring of every potentially hazardous condition, are results of several years of study. These designs have been reviewed and accepted by the U.S. Coast Guard, the American Bureau of Shipping, and U. S. Public Health Service, and will meet the recommendations of the Atomic Energy Commission's Advisory Committee on Reactor Safeguards. In every case, design and construction practice has followed recommendations of American Society of Mechanical Engineers, American Institute of Electrical Engineers, American Society for Testing Materials and other Technical societies. Continuing review is presently being conducted by agencies such as the Atomic Energy Commission's Oak Ridge National Laboratory and Advisory Committee on Reactor Safeguards and other agencies interested in safety of life at sea. In addition, international discussions, particularly with the United Kingdom, have already begun on an informal basis.