



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

FIRST ATOMIC SHIP TRANSPORT INC.

DOCKET NO. 50-238

OPERATING LICENSE

License No. NS-1

1. This license applies to the facility, consisting of a pressurized water nuclear reactor (hereinafter referred to as "the reactor") and associated components and equipment, which is located aboard the N. S. SAVANNAH and described in the license application dated April 30, 1965, submitted by First Atomic Ship Transport Inc.
2. Subject to the conditions and requirements incorporated herein, the Atomic Energy Commission ("the Commission") hereby licenses First Atomic Ship Transport Inc. ("the licensee"):
 - A. Pursuant to Section 104 b of the Atomic Energy Act of 1954, as amended, ("the Act") and Title 10, CFR, Chapter 1, Part 50, "Licensing of Production and Utilization Facilities," to possess, use and operate the reactor as a utilization facility;
 - B. Pursuant to the Act and Title 10, CFR, Chapter 1, Part 70, "Special Nuclear Material," to receive, possess and use at any one time 303.2 kilograms of contained Uranium-235 as fuel for operation of the reactor;
 - C. Pursuant to the Act and Title 10, CFR, Chapter 1, Part 70, to receive, possess and use 2 curies of plutonium as encapsulated plutonium-beryllium neutron sources;
 - D. Pursuant to the Act and Title 10, CFR, Chapter 1, Part 30, to receive, possess and use 305 millicuries of cobalt-60 as sealed sources;
 - E. Pursuant to the Act and Title 10, CFR, Chapter 1, Part 30, "Licensing of Byproduct Material," to receive, possess and use 200 curies of polonium-beryllium neutron sources;
 - F. Pursuant to the Act and Title 10 CFR, Chapter 1, Part 30, to receive, possess and use 30 millicuries of cesium-137 as sealed sources; and
 - G. Pursuant to the Act and Title 10, CFR, Chapter 1, Part 30, to possess, but not to separate, such byproduct material as has been or may be produced by the operation of the reactor.
3. This license shall be deemed to contain and is subject to the conditions specified in Section 50.54 of Part 50, Section 70.32 of Part 70 and Section 30.32 of Part 30 of the Commission's regulations; is subject to all applicable provisions of the Act and rules, regulations and orders of the Commission now or hereafter in effect, and is subject to the additional conditions specified below:

A. Maximum Power Level

The licensee is authorized to operate the reactor at steady state power levels up to a maximum of 80 megawatts thermal.

B. Technical Specifications

The Technical Specifications and Port Operation Criteria attached as Appendix A (hereinafter collectively referred to as the "Technical Specifications") are hereby incorporated in this license. The licensee shall operate the facility only in accordance with the Technical Specifications. No changes shall be made in the Technical Specifications unless authorized by the Commission as provided in 10 CFR 50.59.

C. Authorization of Changes, Tests, and Experiments

The licensee may (1) make changes in the reactor as described in the hazards summary report, (2) make changes in the procedures as described in the hazards summary report, and (3) conduct tests or experiments not described in the hazards summary report only in accordance with the provisions of Section 50.59 of the Commission's regulations. As used in this license, "hazards summary report" means Appendix F of the License Application dated April 30, 1965 and the documents incorporated by reference therein.

D. Records

In addition to those otherwise required under this license and applicable regulations, the licensee shall keep the following records:

- (1) Reactor operating records, including power levels and period of operations at each power level.
- (2) Records showing the radioactivity released or discharged into the air or water beyond the effective control of the licensee as measured at or prior to the point of such release or discharge.
- (3) Records of scrams, including reasons therefor.
- (4) Records of principal maintenance operations involving substitution or replacement of facility equipment or components and the reasons therefor.
- (5) Records of tests and measurements performed pursuant to the requirements of the Technical Specifications.

E. Reports

In addition to reports otherwise required under this license and applicable regulations, the licensee shall inform the Commission of any incident

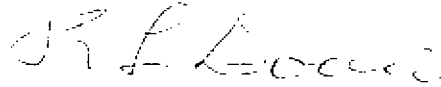
or condition relating to the operation of the facility which prevented or could have prevented a nuclear system from performing its safety function as described in the Technical Specifications or in the hazards summary report. For each such occurrence, the licensee shall promptly notify by telephone or teletype, the Director of the appropriate Atomic Energy Commission Regional Compliance Office listed in Appendix D of 10 CFR 20 and shall submit within 10 days a report in writing to the Director, Division of Reactor Licensing, with a copy to the Regional Compliance Office.

- (1) The licensee shall report to the Commission in writing within 30 days of its observed occurrence any substantial variance disclosed by operation of the facility from performance specifications contained in the hazards summary report or the Technical Specifications.
- (2) The licensee shall report to the Commission in writing within 30 days of its occurrence any significant change in transient or accident analysis, as described in the hazards summary report.
- (3) The licensee shall submit to the Commission, at least semi-annually, a written report of operating experience including:
 - a. A brief explanation of the cause of each unplanned shutdown of the reactor.
 - b. The amount of radioactive material removed from the reactor by releases, discharges, and shipments of radioactive waste material.
 - c. The levels of radioactivity measured at monitoring stations aboard the SAVANNAH.
 - d. A description of changes, tests, and experiments performed pursuant to Paragraph 50.59(2) of the Commission's Rules and Regulations.
 - e. A description of the principal maintenance performed on the facility.
 - f. A summary of reactor operation performed during the period, including an explanation of malfunctions of any equipment important to safety and periodic testing performed as required in the Technical Specifications.

Such reports shall be due within 60 days after the end of each reporting period.

4. This license is effective as of the date of issuance and shall expire at midnight three years after the date of issuance.

FOR THE ATOMIC ENERGY COMMISSION



R. L. Doan, Director
Division of Reactor Licensing

Date of Issuance: AUG 5 1965

Attachments:

Appendix A, Technical Specifications,
including Port Operation Criteria