

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

LICENSE AUTHORITY FILE COPY

Do Not Remove

ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE

DOCKET NO. 50-170

AMENDED FACILITY LICENSE

License No. R-84
Amendment No. 13

The Atomic Energy Commission (hereinafter "the Commission") has found that:

- A. The application for license, as amended, complies with the requirements of the Atomic Energy Act of 1954, as amended (hereinafter "the Act"), and the Commission's regulations set forth in Title 10, CFR, Chapter 1;
- B. The reactor has been constructed in conformity with Construction Permit No. CPRR-61 and will operate in conformity with the application and in conformity with the Act and the rules and regulations of the Commission;
- C. There is reasonable assurance that the reactor can be operated at the designated location without endangering the health and safety of the public;
- D. The Armed Forces Radiobiology Research Institute (hereinafter "AFRRI") is technically and financially qualified to operate the reactor, to assume financial responsibility for payment of Commission charges for special nuclear material and to undertake and carry out the proposed activities in accordance with the Commission's regulations;
- E. The possession and operation of the reactor and the receipt, possession and use of the special nuclear material in the manner proposed in the application will not be inimical to the common defense and security or to the health and safety of the public; and
- F. AFRRI is a Federal agency and is therefore exempt from the financial protection requirement of subsection 170 a of the Act. AFRRI has executed an indemnity agreement pursuant to 10 CFR Part 140.

Facility License No. R-84, as amended, is hereby amended in its entirety to read as follows:

- A. This license applies to the TRIGA Mark F tank-type nuclear reactor (herein "the reactor") which is owned by AFRRRI and located on the National Naval Medical Center site in Bethesda, Maryland, and described in the National Naval Medical Center application for license dated June 24, 1960, and subsequent amendments thereto, including the most recent amendment by AFRRRI dated May 27, 1966, and supplements thereto dated October 7, 1966, December 19, 1966, and November 22, 1967 (herein referred to as "the application"), and authorized for construction by Construction Permit No. CPRR-61 originally issued to National Naval Medical Center and later transferred to AFRRRI.
- B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses AFRRRI:
1. Pursuant to Section 104 c of the Act and Title 10, CFR, Chapter 1, Part 50, "Licensing of Production and Utilization Facilities", to possess and operate the reactor as a utilization facility at the designated location in Bethesda, Maryland, in accordance with the procedures and limitations described in the application and in this license;
 2. Pursuant to the Act and Title 10, CFR, Chapter 1, Part 70, "Special Nuclear Material", to receive, possess and use 5.0 kilograms of contained uranium-235 for use in connection with operation of the reactor; and
 3. Pursuant to the Act and Title 10, CFR, Chapter 1, Part 30, "Rules of General Applicability to Licensing of Byproduct Material", to receive, possess and use a 3-curie sealed americium-beryllium neutron source for reactor startup; and to possess, but not to separate, such byproduct material as may be produced by operation of the reactor.
- C. This license shall be deemed to contain and be subject to the conditions specified in Part 20, Section 30.34 of Part 30, Sections 50.54 and 50.59 of Part 50 and Section 70.32 of Part 70 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 or incorporated below:
1. Maximum Power Level:
AFRRRI may operate the reactor at steady-state power levels up to a maximum of 1000 kilowatts (thermal).

2. Technical Specifications

The Technical Specifications contained in Appendix A hereto for operation at power levels up to 1000 kilowatts (thermal) are hereby incorporated in this license. AFRRI shall operate the reactor in accordance with these Technical Specifications. No changes shall be made in the Technical Specifications unless authorized by the Commission as provided in Section 50.59 of 10 CFR Part 50.

3. Records

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

- (a) Reactor operating records, including power levels and periods of operation at each power level.
- (b) Records showing radioactivity released or discharged into the air or water beyond the effective control of AFRRI as measured at or prior to the point of such release or discharge.
- (c) Records of emergency shutdowns and inadvertent scrams, including reasons therefor.
- (d) Records of maintenance operations involving substitution or replacement of reactor equipment or components.
- (e) Records of experiments installed including description, reactivity worths, locations, exposure time, total irradiation and any unusual events involved in their handling.
- (f) Records of tests and measurements required by the Technical Specifications.

4. Reports

In addition to reports otherwise required by applicable regulations:

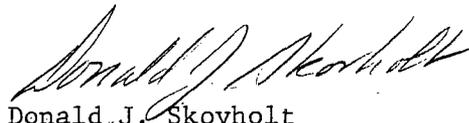
- (a) AFRRI shall inform the Commission of any incident or condition relating to the operation of the reactor which prevented or could have prevented a nuclear system from performing its safety function as described in the Technical Specifications or in the safety analysis report. For each such occurrence, AFRRI shall promptly notify by telephone or telegraph the Director of the appropriate Atomic Energy Commission Regional Compliance Office listed in

Appendix D of 10 CFR Part 20 and shall submit within ten (10) days a report in writing to the Director, Division of Reactor Licensing (hereinafter, "Director, DRL"), with a copy to the Regional Compliance Office.

- (b) AFRRI shall report to the Director, DRL, in writing within thirty (30) days of its occurrence any substantial variance disclosed by operation of the reactor from performance specifications contained in the safety analysis report or in the Technical Specifications.
- (c) AFRRI shall report to the Director, DRL, in writing within thirty (30) days of its occurrence any significant change in the transient or accident analysis as described in the safety analysis report.

D. This license is effective as of the date of issuance and shall expire at midnight, November 8, 1970.

FOR THE ATOMIC ENERGY COMMISSION



Donald J. Skovholt
Assistant Director for Reactor Operations
Division of Reactor Licensing

Attachment:
Appendix A - Technical Specifications

Date of Issuance: August 29, 1968