UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

THE UNIVERSITY OF ILLINOIS

DOCKET NO. 50-151

AMENDMENT TO FACILITY LICENSE

Amendment No. 3
License No. R-115

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by the University of Illinois (the licensee) dated October 16, 1980, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and

   F. Publication of notice of this amendment is not required since it does not involve a significant hazards consideration nor amendment of a license of the type described in 10 CFR Section 2.106(a)(2).

2. Accordingly, paragraph 1. and 3.B. of Facility License No. R-115 are hereby amended to read as follows:

   1. This license applies to the Advanced TRIGA nuclear reactor (herein "the reactor"), owned by the University of Illinois and located on its campus in Urbana, Illinois, and which is described in application for license dated August 28, 1967, and supplements thereto dated October 26, 1967, and March 29, May 17, March 11, May 15, and July 11, 1969 (herein referred to as "the application"), and further supplemented October 16, 1980 (to expire on April 21, 1981), and authorized for construction by Construction Permit No. CPRR-105.

3.B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment 3, are hereby incorporated in the license. The licensee shall update the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance and shall expire on April 21, 1981.

FOR THE NUCLEAR REGULATORY COMMISSION

James R. Miller, Chief
Standardization & Special
Projects Branch
Division of Licensing

Attachment:
Changes to the
Technical Specifications

Date of Issuance: October 23, 1980

ATTACHMENT TO LICENSE AMENDMENT NO. 3

FACILITY OPERATING LICENSE R-115

DOCKET NO. 50-151

Revise Appendix A Technical Specifications as follows:

Remove Page	Insert Page
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Measuring Channel	Minimum Number Operable	Function	Operating Mode in which Required
* Startup Count Rate	1	Prevent control rod withdrawal when neutron count rate is less than 1 per second	Reactor Startup
Standard Control Rod Position	1	Prevent withdrawal of a transient rod when the standard control rods are not fully inserted. (This does not apply to the adjustable transient rod if the movable cylinder is fully inserted when the air pressure is applied.)	Steady-State Mode

Ch4-3 12.21-73

Bases

The interlocks which prevent the withdrawal of the transient rods in the steady-state mode or if the power level is greater than 250 kw prevent inadvertent pulses which might cause the fuel temperature to exceed the safety limit. The interlock to prevent startup of the reactor with less than one neutron per second indicated on the startup channel assures that sufficient neutrons are available to assure proper operation of the startup channel.

The fuel temperature scrams provide the protection to assure that if a condition results in which the limiting safety system setting is exceeded, an immediate shutdown will occur to keep the fuel temperature below the safety limit. The power level scrams are provided in all modes of operation as added protection against abnormally high fuel temperatures and to assure that the reactor operation stays within the licensed limits. The manual scram allows the operator to shut down the system if an unsafe or abnormal condition occurs.

The specifications on the reactor tank water level are included as safety measures in the event of a serious loss of primary system water. The tank water level criterion assures that reactor operations are terminated when a major leak occurs in the primary system. The spray system assures removal of the decay heat from the fuel elements if the water level in the tank drops below the top grid plate. The analysis in Section VI of the SAR shows that no fuel damage would occur under these conditions.

*Alternatively, the reactor start-up shall be accomplished according to the written procedures, "Use of BF_3 System for Start-Up Channel", submitted as attachment to letter request dated October 16, 1980. This authorization shall expire on April 21, 1981.