



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

THE UNIVERSITY OF ILLINOIS
DOCKET NO. 50-151
AMENDMENT TO FACILITY LICENSE

Amendment No. 6
License No. R-115

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to Facility License No. R-115 filed by the University of Illinois (the licensee), dated June 9, 1992, as supplemented on October 8, 1992, December 1, 1992, January 5, 1993, and January 11, 1993 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as 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. Prior notice of this amendment was not required by 10 CFR 2.105(a)(4) and publication of notice for this amendment is not required by 10 CFR 2.105(a)(2).

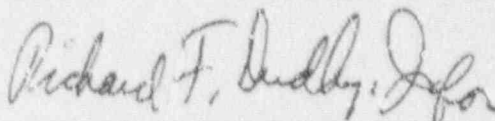
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the enclosure to this license amendment, and paragraph 3.B. of Facility License No. R-115 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 6, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Seymour H. Weiss, Director
Non-Power Reactors and Decommissioning
Project Directorate
Division of Operating Reactor Support
Office of Nuclear Reactor Regulation

Enclosure:
Appendix A Technical
Specifications Changes

Date of Issuance: February 16, 1993

ENCLOSURE TO LICENSE AMENDMENT NO. 6

FACILITY LICENSE NO. R-115

DOCKET NO. 50-151

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change.

Remove Pages

14
15

Insert Pages

14
15

3.5 Reactor Safety System

Applicability

This specification applies to the reactor safety system channels.

Objective

The objective is to require the minimum number of reactor safety system channels that must be operable in order to assure that the fuel temperature safety limit is not exceeded.

Specification

The reactor shall not be operated unless the safety system channels described in the following table are operable.

<u>Measuring Channel</u>	<u>Minimum Number Operable</u>	<u>Function</u>	<u>Operating Mode in which Required</u>
Fuel Element Temperature	2*	Scram	All Modes
Reactor Power Level	1	Scram	Steady-State Mode and Square-Wave Mode
Reactor Power Level	1	Prevent transient rod withdrawal when power is >250 kw	All Modes
Peak Reactor Power	1	Scram	Pulse Mode
Reactor Tank Water Level (When water level less than 14 feet above the top grid plate)	2	Scram and Initiate core spray	All Modes Steady-state Above 1 MW
Manual Button	1	Scram	All Modes
Watchdog (DAC to CSC)	1	Scram	All Modes

* While operating in a steady-state mode, the bypass of one (1) of not less than two (2) temperature scram circuits for a period of up to 30 minutes for a channel check is permissible.

<u>Measuring Channel</u>	<u>Minimum Number Operable</u>	<u>Function</u>	<u>Operating Mode in which Required</u>
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

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 such that the reactor will scram before a safety limit is exceeded as discussed in the Safety Analysis Report. The manual scram allows the operator to shutdown 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.

The watchdog scram ensures that adequate communications between the Data Acquisition Computer (DAC) and the Control System Computer (CSC) units.