

April 18, 2001

Mr. Michael Whalley, Manager
KSU Nuclear Reactor Facility
Department of Mechanical and Nuclear Engineering
112 Ward Hall
Kansas State University
Manhattan, KS 66506-5204

SUBJECT: ISSUANCE OF AMENDMENT NO. 14 TO FACILITY LICENSE NO. R-88 -
KANSAS STATE UNIVERSITY TRIGA MARK II RESEARCH REACTOR
(TAC NO. MB1107)

Dear Mr. Whalley:

The Commission has issued the enclosed Amendment No. 14 to Facility License No. R-88 for the Kansas State University (KSU) TRIGA Mark II research reactor. The amendment changes the facility license in response to application dated February 1, 2001, and supplement dated February 12, 2001.

The amendment extends the license expiration date from August 15, 2001, to October 16, 2002. This amendment recaptures the construction time between the issuance date of the Construction Permit No. CPRR-66, and issuance of the operating license.

A copy of the related safety evaluation supporting Amendment No. 14 and a copy of the notice of renewal are also included.

Sincerely,

/RA/

Marvin M. Mendonca, Senior Project Manager
Events Assessment, Generic Communications and
Non-Power Reactors Branch
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket No. 50-188

Enclosures:

1. Amendment No. 14
2. Safety Evaluation
3. Notice of Renewal

cc w/enclosures: Please see next page

Kansas State University

Docket No. 50-188

cc:

Office of the Governor
State of Kansas
Topeka, KS 66612

Mayor of Manhattan
P.O. Box 748
Manhattan, KS 66502

Test, Research, and Training
Reactor Newsletter
University of Florida
202 Nuclear Sciences Center
Gainesville, FL 32611

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KANSAS STATE UNIVERSITY
DOCKET NO. 50-188
AMENDMENT TO FACILITY LICENSE

Amendment No. 14
Licensee No. R-88

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by the Kansas State University (the licensee), dated February 1, 2001, and supplement dated February 12, 2001, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the regulations of the Commission as stated 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 that (i) the activities authorized by this amendment can be conducted without endangering the health and safety of the public and (ii) such activities will be conducted in compliance with the rules and regulations of the Commission;
 - 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 regulations of the Commission and all applicable requirements have been satisfied; and
 - F. Prior notice of this amendment was not required by 10 CFR 2.105, and publication of notice for this amendment is not required by 10 CFR 2.106.

2. Accordingly, the license is amended by a change to paragraph 4. of the Amended Facility License No. R-88, which is hereby amended to read as follows:

This amended license is effective as of its date of issuance and shall expire at midnight, October 16, 2002.

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

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Ledyard B. Marsh, Chief
Events Assessment, Generic Communications and
Non-Power Reactors Branch
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Date of Issuance: April 18, 2001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 14 TO

AMENDED FACILITY LICENSE NO. R-88

KANSAS STATE UNIVERSITY TRIGA MARK II

DOCKET NO. 50-188

1.0 INTRODUCTION

By letter dated February 1, 2001, and supplement dated February 12, 2001, the Kansas State University (KSU or the licensee) submitted a request to extend the expiration date of its TRIGA Mark II research reactor license from August 15, 2001, to October 16, 2002. The licensee requested recapture of the construction time between August 15, 1961, the issuance date of the Construction Permit No. CPRR-66, and October 16, 1962, the date of issuance of Facility License No. R-88.

2.0 EVALUATION

The NRC staff determined that the time between issuance of the Construction Permit to issuance of the Facility Operating License represents about 14 months that were not available to the licensee due to construction. With the extension of this period the license would expire at midnight October 16, 2002.

The licensee referred to the safe operating history of the research reactor. The licensee also has a safety review process for potential facility changes with independent Reactor Safeguards Committee evaluation. This committee is required by Technical Specifications (TS), with experts in reactor safety and operation, including the Reactor Supervisor. The University Radiation Safety Officer is an ex-officio member with veto authority over changes.

The licensee discussed its administrative controls (e.g., operator training, emergency preparedness, security plan, quality assurance and procedures). These controls provide additional assurance of continued acceptable performance.

Also, the licensee discussed the material condition of the facility and, based on their examinations, found no integrity or material condition issues. Visual inspection of the building found no evidence of structural movement or damage. The licensee inspects the fuel at regular intervals based on use. The licensee is also required to test safety and radiation monitoring and control components on regular intervals. TS requirements on pool water conductivity have ensured the potential for degradation from corrosion is minimal. Each control rod is visually inspected once every two years.

The NRC staff considered the condition of various facility systems and the ability of these systems to continue to function during such an additional time. The facility TS require surveillance for components that have a safety function. The licensee has acceptably conducted surveillance following the TS. The TS provide assurance that the facility equipment acceptably functions as described in the safety analysis report. The NRC inspection program looks at the frequencies and results of TS surveillance activities. The inspection program has not identified any problems that could unacceptably affect the condition of safety equipment. The licensee has maintained emergency preparedness, security, operator training, and quality assurance type programs according to the requirements. NRC's review of KSU annual reports and the NRC inspection program have shown that the licensee has operated the facility safely and finds that it should continue to operate acceptably.

The NRC staff concludes from its considerations of the design, operation, testing, and monitoring of the structures, systems, and components that an extension of the operating license to a 40-year service life is consistent with NRC safety evaluations, supporting amendments, and licensing documentation. Further, the NRC staff considers that the licensee's organization as a State of Kansas institution has maintained the capability to continue operations safely. Therefore, the NRC staff finds reasonable assurance that the KSU research reactor will continue to operate safely for the additional period authorized by this amendment.

3.0 ENVIRONMENTAL CONSIDERATION

The Commission has prepared an Environmental Assessment and Finding of No Significant Impact (EA), which was published in the Federal Register on March 27, 2001 (66 FR 16696).

On the basis of the EA, the Commission has determined that no environmental impact statement is required and that issuance of this amendment will have no significant adverse effect on the quality of the human environment.

4.0 CONCLUSION

The NRC staff has concluded, based on the considerations discussed above, that (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously evaluated, or create the possibility of a new or different kind of accident from any accident previously evaluated, and does not involve a significant reduction in a margin of safety, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by the proposed activities, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or the health and safety of the public.

Principal Contributor: Marvin M. Mendonca

Date: April 18, 2001

UNITED STATES NUCLEAR REGULATORY COMMISSION

NOTICE OF RENEWAL OF FACILITY LICENSE FOR

THE KANSAS STATE UNIVERSITY TRIGA MARK II

DOCKET NO. 50-188

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 14 to Facility License No. R-88 issued to the Kansas State University (the licensee). This license amendment extends the license for the Kansas State University TRIGA Mark II research reactor in Manhattan, Kansas. The facility is a non-power reactor that has been operating at power levels not in excess of 250 kilowatts (thermal).

The extended Facility License will expire on October 16, 2002. This extension was issued to recapture the construction time between August 15, 1961, the issuance date of the Construction Permit No. CPRR-66, and October 16, 1962, the date of issuance of Facility License.

The amended license complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I. Those findings are set forth in the license amendment.

The Commission has prepared a safety evaluation to extend the license, which is attached to the amendment. The Commission has, based on that safety evaluation, concluded that the facility can continue to be operated by the licensee without endangering the health and safety of the public.

The Commission issued an Environmental Assessment and Finding of No Significant

Impact that was published in the Federal Register on March 27, 2001, (66 FR 16696).

Continued operation of the reactor will not require alteration of buildings or structures, will not lead to significant changes in effluents released from the facility to the environment, will not increase the probability or consequences of accidents, and will not involve any unresolved issues concerning alternative uses of available resources. The Commission has concluded that this action will not have a significant effect on the quality of the human environment.

For further details with respect to this action, see (1) the application for amendment dated February 1, 2001, as supplemented on February 12, 2001, (2) Amendment No. 14 to Facility License R-88, (3) the Commission's related safety evaluation report, and (4) the environmental assessment and finding of no significant impact. These documents may be examined, and/or copied for a fee, at the NRC's Public Document Room, located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will also be accessible electronically from the ADAMS Public Library component on the NRC Web site, <http://www.nrc.gov> (the Electronic Reading Room).

Dated at Rockville, Maryland, this 18th Day of April, 2001.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Ledyard B. Marsh, Chief
Events Assessment, Generic Communications, and
Non-Power Reactors Branch
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation