



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

December 22, 2016

Dr. Timothy W. Koeth, Director  
University of Maryland  
Radiation Facilities and Nuclear Reactor  
Chemical and Nuclear Engineering  
Building 090  
College Park, MD 20742-2115

SUBJECT: UNIVERSITY OF MARYLAND—ISSUANCE OF RENEWED FACILITY  
OPERATING LICENSE NO. R-70 FOR THE MARYLAND UNIVERSITY  
TRAINING REACTOR (TAC NO. ME1592)

Dear Dr. Koeth:

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Renewed Facility Operating License No. R-70 for the University of Maryland's Maryland University Training Reactor in response to the application for license renewal dated May 12, 2000 as supplemented by letters dated June 7, August 4, September 17, and October 7, 2004; April 18, 2005; April 25 (two letters), August 28 (two letters), September 7, November 9, and December 18, 2006; May 27, July 28, and September 22, 2010; January 31, February 2, May 2, July 5, July 29, September 26, September 28, and October 12, 2011; February 9, March 14, May 22, and August 29, 2012; March 21, 2013; April 10, June 18, and November 25, 2014 (two letters); July 1, November 23, and December 2, 2015; and January 5, February 29, November 1, November 2, November 10, November 17 (two letters), and December 2, 2016. The renewed facility operating license is effective on the date of issuance, and shall expire at midnight, 20 years from the date of issuance, unless terminated sooner.

In accordance with agency practice, the renewed license issued by the NRC has restated the license in its entirety, incorporating all changes and amendments made since the issuance of the original license as appropriate. Also enclosed with the renewed facility operating license, is the safety evaluation report associated with the license renewal. A Notice of Issuance of Renewed Facility Operating License No. R-70 has been sent to the Office of the Federal Register for publication. The environmental assessment for this renewal was published in the *Federal Register* on December 22, 2016 (81 FR 93969-93974) and was sent to you under separate cover dated December 15, 2016.

T. Koeth

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If you have any questions, please contact me at 301-415-4246 or by electronic mail at [Eben.Allen@nrc.gov](mailto:Eben.Allen@nrc.gov).

Sincerely

*/RA/*

Eben S. Allen, Project Manager  
Research and Test Reactors Licensing Branch  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

Docket No. 50-166

Enclosures:

1. Facility Operating License No. R-70
2. Safety Evaluation Report

cc: See next page

University of Maryland Docket

No. 50-166

cc:

Director, Dept. of Natural Resources  
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Test, Research and Training  
Reactor Newsletter  
P.O. Box 118300  
University of Florida  
Gainesville, FL 32611

T. Koeth

- 2 -

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**ADAMS Accession Nos.: PKG: ML16075A130; LTR: ML16075A211; FRN: ML16075A212; Memo to ADM: ML16075A213 \*concurred via e-mail NRR-079**

<b>OFFICE</b>	NRR/DPR/PRLB/PM	Tech Editor*	NRR/DPR/PRLB/LA	NRR/DPR/PRLB/BC
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<b>DATE</b>	12/7/2016	12/12/2016	12/20/2016	12/22/2016

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UNIVERSITY OF MARYLAND

DOCKET NO. 50-166

RENEWED FACILITY OPERATING LICENSE

License No. R-70

1. The U.S. Nuclear Regulatory Commission (“the Commission”) has found that:
  - A. The application for renewal of Facility Operating License No. R-70 filed by the University of Maryland (“the licensee”), dated May 12, 2000, as supplemented by letters dated June 7, August 4, September 17, and October 7, 2004; April 18, 2005; April 25 (two letters), August 28 (two letters), September 7, November 9, and December 18, 2006; May 27, July 28, and September 22, 2010; January 31, February 2, May 2, July 5, July 29, September 26, September 28, and October 12, 2011; February 9, March 14, May 22, and August 29, 2012; March 21, 2013; April 10, June 18, and November 25, 2014 (two letters); July 1, November 23, and December 2, 2015; and January 5, February 29, November 1, November 2, November 10, November 17 (two letters), and December 2, 2016, (“the application”), 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 Title 10 of the *Code of Federal Regulations* (10 CFR), Chapter I;
  - B. Construction of the Maryland University Training Reactor (“the facility”) TRIGA-type nuclear research reactor was completed in substantial conformity with Construction Permit No. CPRR-53 (dated June 29, 1960) and modified in conformity with CPRR-108 (dated March 25, 1970) and the application, as amended; the provisions of the Act; and the rules and regulations of the Commission;
  - C. The facility will operate in conformity with the application, as supplemented, the provisions of the Act, and the rules and regulations of the Commission;
  - D. There is reasonable assurance that: (i) the activities authorized by this license can be conducted without endangering the health and safety of the public, and (ii) such activities will be conducted in compliance with the Commission’s regulations;
  - E. The licensee is technically and financially qualified to engage in the activities authorized by this license in accordance with the rules and regulations of the Commission;
  - F. The applicable provisions of 10 CFR Part 140, “Financial Protection Requirements and Indemnity Agreements,” have been satisfied;

Enclosure 1

- G. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public;
  - H. The issuance of this license is in accordance with 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," of the Commission's regulations and all applicable requirements have been satisfied; and
  - I. The receipt, possession and use of byproduct and special nuclear materials as authorized by this facility operating license will be in accordance with the Commission's regulations in 10 CFR Part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material," and 10 CFR Part 70, "Domestic Licensing of Special Nuclear Material."
2. Accordingly, Facility Operating License No. R-70 is hereby renewed in its entirety to read as follows:
- A. This license applies to the Maryland University Training Reactor (herein "the facility") TRIGA-type nuclear research reactor owned by the University of Maryland (herein "the licensee"). The facility is located on the campus of the University of Maryland in College Park, MD, and described in the licensee's application for license renewal, dated May 12, 2000, as supplemented.
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses the University of Maryland as follows:
    - 1. Pursuant to Subsection 104c of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," to possess, use, and operate the facility as a utilization facility at the designated location in accordance with the procedures and limitations described in the application and set forth in this license.
    - 2. Pursuant to the Act and 10 CFR Part 70, the following activities are included:
      - a. to receive, possess, and use, but not separate, in connection with the operation of the facility, up to 3,441 grams of contained uranium-235 enriched to less than 20 percent in the form of TRIGA-type reactor fuel;
      - b. to receive, possess, but not use, and not separate, in connection with the operation of the facility, up to 1,060 grams of contained uranium-235 enriched to less than 20 percent in the form of "Alternate Reactor Fuel" TRIGA-type reactor fuel;
      - c. to receive, possess, and use, but not separate, in connection with the operation of the facility, up to 15 grams of special nuclear material, of any enrichment, in the form of detectors, fission plates, foils, and solutions;

- d. to receive, possess, and use, but not separate, in connection with the operation of the facility, up to 80 grams of plutonium contained in encapsulated plutonium-beryllium neutron sources;
  - e. to receive, possess, and use, but not separate, in connection with the operation of the facility, such special nuclear material as may be produced by the operation of the facility; and
  - f. to receive, possess, but not use, and not separate, in connection with the operation of the facility, such special nuclear material as may be produced by the operation of other facilities in the form of "Alternate Reactor Fuel."
3. Pursuant to the Act and 10 CFR Part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material," the following activities are included:
- a. to receive, possess, and use in connection with operation of the facility, such byproduct material as may be produced by operation of the facility, which cannot be separated except for byproduct material produced in non-fueled reactor experiments.
  - b. to receive, possess, but not use, and not separate, in connection with operation of the facility, such byproduct materials as may be produced by operation of other facilities in the form of "Alternate Reactor Fuel."
- C. This license shall be deemed to contain, and is subject to the conditions specified in 10 CFR Parts 20, 30, 40, 50, 51, 55, 70, and 73 of the Commission's regulations; is subject to all provisions of the Act, and to the 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  
  
The licensee is authorized to operate the reactor at a steady-state power level up to a maximum of 250 kilowatts (thermal) in accordance with the limitations in the Technical Specifications.
  - 2. Technical Specifications  
  
The Technical Specifications contained in Appendix A are hereby incorporated in their entirety in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. Physical Security Plan

The licensee shall maintain and fully implement all provisions of the Commission-approved physical security plan, including changes made pursuant to the authority of 10 CFR 50.54(p). The approved physical security plan, entitled "Security Plan for the University of Maryland Training Reactor February 10, 2016," consists of documents withheld from public disclosure pursuant to 10 CFR 73.21, "Protection of Safeguards Information Performance Requirements."

This license is effective as of the date of issuance and shall expire at midnight, 20 years from the date of issuance.

For the Nuclear Regulatory Commission

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William M. Dean, Director  
Office of Nuclear Reactor Regulation

Attachment:  
Appendix A, Technical Specifications

Date of Issuance: December 22, 2016