

July 2, 2009

Dr. Wade Richards, Manager of Operations and Engineering
NIST Center for Neutron Research
National Institute of Standards and Technology
U. S. Department of Commerce
100 Bureau Drive, Mail Stop 8561
Gaithersburg, MD 20899-8561

SUBJECT: NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, ISSUANCE OF
RENEWED FACILITY LICENSE NO. TR-5 FOR THE NATIONAL BUREAU OF
STANDARDS REACTOR (TAC NO. MD3410)

Dear Dr. Richards:

The U.S. Nuclear Regulatory Commission (NRC) has issued renewed Facility Operating License No. TR-5 for the National Institute of Standards and Technology National Bureau of Standards Reactor in response to the application for license renewal dated April 9, 2004, as supplemented on October 2, 2006, May 30 and August 14, 2007, September 16, October 21, and December 8, 2008, and March 3, March 19, and April 22, 2009. The renewed license is effective as of the date of this letter and shall expire at midnight, 20 years from the date of issuance, unless sooner terminated. Enclosed with the renewed license is a copy of the Notice of Issuance of Renewed Facility Operating License No. TR-5 that is being sent to the Office of the Federal Register for publication and a copy of the safety evaluation report associated with the license renewal. The NRC sent the Notice of Availability of the Final Environmental Impact Statement and the Final Environmental Impact Statement associated with the license renewal to you under separate cover dated January 14, 2008. If you have any questions regarding this action, please contact me at 301-415-2784 or by electronic mail at William.Kennedy@nrc.gov.

Sincerely,

/RA/

William B. Kennedy, Project Manager
Research and Test Reactors Branch A
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Docket No. 50-184

Enclosures:

1. Renewed Facility License No. TR-5
2. Safety Evaluation Report
3. Notice of Issuance of Renewed Facility License No. TR-5

cc: See next page

National Institute of Standards and Technology

Docket No. 50-184

cc:

Director, Department of State Planning
301 West Preston Street
Baltimore, MD 21201

Director, Air & Radiation Management Adm.
Maryland Dept of the Environment
1800 Washington Blvd., Suite 710
Baltimore, MD 21230

Director, Department of Natural Resources
Power Plant Siting Program
Energy and Coastal Zone Administration
Tawes State Office Building
Annapolis, MD 21401

President
Montgomery County Council
100 Maryland Avenue
Rockville, MD 20850

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

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ACCESSION NO. PKG: ML090990113, LTR: ML090990120, TS: ML090990141, SE: ML090990135, FRN: ML090990107 *Input provided (ML090230495)

Office	PRTA:PM	PRTA:LA	PFPB:BC	OGC	PRTA:BC	DPR:DD	DPR:D	NRR:D	PRTA:PM
Name	WKennedy wbk	GLappert gkl	RCarlson*	BMizuno bm	KBrock kmb	TBlount (TMcGinty for)	TMcGinty tm	ELeeds el	WKennedy wbk
Date	05/04/09	05/03/09	02/03/09	06/05/09	05/18/09	06/09/09	06/09/09	7/2/09	7/2/09

UNITED STATES NUCLEAR REGULATORY COMMISSION
THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
DOCKET NO. 50-184
NATIONAL BUREAU OF STANDARDS TEST REACTOR
RENEWED FACILITY OPERATING LICENSE

License No. TR-5

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for renewal of Facility Operating License No. TR-5 filed by the National Institute of Standards and Technology (the licensee) dated April 9, 2004, as supplemented on October 2, 2006, May 30 and August 14, 2007, September 16, October 21, and December 8, 2008, and March 3, March 19, and April 22, 2009 (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, Chapter 1, of the *Code of Federal Regulations* (10 CFR);
 - B. Construction of the National Bureau of Standards test reactor (the facility) was completed in substantial conformity with Construction Permit No. CPTR-5 dated April 22, 1963, the provisions of the Act, and the rules and regulations of the Commission;
 - C. The facility will operate in conformity with the application, 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 renewed license can be conducted at the designated location 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;
 - 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 licensee is a Federal agency which, in accordance with 10 CFR Part 140, is not required to furnish proof of financial protection. The licensee has executed an indemnity agreement which satisfies the requirements of 10 CFR Part 140;
 - 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; and
 - I. The receipt, possession and use of byproduct and special nuclear materials as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Part 30 and 10 CFR Part 70.
2. Facility Operating License No. TR-5 is hereby renewed in its entirety to read as follows:
- A. This license applies to the National Bureau of Standards test reactor (the reactor) that is owned by the National Institute of Standards and Technology (NIST or the licensee), located on NIST's campus one mile southwest of Gaithersburg, Maryland, and described in the licensee's application, as supplemented.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses the National Institute of Standards and Technology:
 - 1. Pursuant to subsection 104c of the Act, and Title 10, Part 50, "Domestic Licensing of Production and Utilization Facilities," of the Code of Federal Regulations (10 CFR Part 50), to possess, use, and operate the reactor as a utilization facility at the designated location in accordance with the procedures and limitations described in the application and this license.
 - 2. Pursuant to the Act and 10 CFR Part 70, "Domestic Licensing of Special Nuclear Material," to receive, possess, and use in connection with operation of the reactor:

- a. up to 45.0 kilograms of contained uranium-235 of any enrichment, provided that less than 5.0 kilograms of this amount be unirradiated;
 - b. to possess and use, but not to separate such special nuclear material as may be produced by operation of the reactor.
 3. Pursuant to the Act and 10 CFR Part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material," to possess and use a two-curie americium-beryllium neutron source for reactor startup.
 4. Pursuant to the Act and 10 CFR Part 30 to possess, use, and transfer but not to separate, except for byproduct material produced in non-fueled experiments, such byproduct material as may be produced by operation of the reactor.
- C. This license shall be deemed to contain and is subject to the conditions specified in Parts 20, 30, 50, 51, 55, 70, 73, and 100 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 below:
1. The licensee is authorized to operate the reactor at steady-state power levels up to a maximum of 20 megawatts (thermal).
 2. The technical specifications contained in Appendix A are hereby incorporated in the license. The licensee shall operate the reactor in accordance with the technical specifications.
 3. The licensee shall maintain and fully implement all of the 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 consists of a National Institute of Standards and Technology document, withheld from public disclosure pursuant to 10 CFR 73.21, entitled, "NBSR Safeguards Plan," dated May 1983, transmitted by letter dated May 5, 1983.

- D. This license is effective as of the date of issuance and shall expire at midnight twenty years from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Attachment:
Appendix A, Technical Specifications

Date of Issuance: July 2, 2009