

April 25, 2012

Dr. Melinda Krahenbuhl, Director
The Reed Research Reactor
Reed College
3203 SE Woodstock Blvd.
Portland, OR 97202-8199

SUBJECT: REED COLLEGE – ISSUANCE OF RENEWED FACILITY OPERATING
LICENSE NO. R-112 FOR THE REED RESEARCH REACTOR (TAC NO.
ME1583)

Dear Dr. Krahenbuhl:

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Renewed Facility Operating License No. R-112 for Reed College in response to the application for license renewal dated August 29, 2007, as supplemented on January 26, July 30, and October 15, 2010, and May 20, August 3, and December 12, 2011, and January 27, and March 26, 2012. The renewed facility operating license is effective as of the date of the license and shall expire at midnight, twenty years from the date of issuance, unless terminated sooner.

In accordance with agency practice, the NRC has restated the license in its entirety, incorporating all changes and amendments made since the issuance of the original license. 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-112 is being sent to the Office of the *Federal Register* for publication. The environmental assessment was sent to you under separate cover.

If you have any questions, please contact me at 301-415-0893 or by electronic mail at Geoffrey.Wertz@nrc.gov.

Sincerely,

/RA/

Geoffrey A. Wertz, Project Manager
Research and Test Reactors Licensing Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Docket No. 50-288

Enclosures:

1. Facility Operating License No. R-112
2. Safety Evaluation Report

cc: See next page

April 25, 2012

Dr. Melinda Krahenbuhl, Director
The Reed Research Reactor
Reed College
3203 SE Woodstock Blvd.
Portland, OR 97202-8199

SUBJECT: REED COLLEGE – ISSUANCE OF RENEWED FACILITY OPERATING
LICENSE NO. R-112 FOR THE REED RESEARCH REACTOR (TAC NO.
ME1583)

Dear Dr. Krahenbuhl:

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Renewed Facility Operating License No. R-112 for Reed College in response to the application for license renewal dated August 29, 2007, as supplemented on January 26, July 30, and October 15, 2010, and May 20, August 3, and December 12, 2011, and January 27, and March 26, 2012. The renewed facility operating license is effective as of the date of the license and shall expire at midnight, twenty years from the date of issuance, unless terminated sooner.

In accordance with agency practice, the NRC has restated the license in its entirety, incorporating all changes and amendments made since the issuance of the original license. 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-112 is being sent to the Office of the *Federal Register* for publication. The environmental assessment was sent to you under separate cover.

If you have any questions, please contact me at 301-415-0893 or by electronic mail at Geoffrey.Wertz@nrc.gov.

Sincerely,
/RA/

Geoffrey A. Wertz, Project Manager
Research and Test Reactors Licensing Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Docket No. 50-288

Enclosures:

1. Facility Operating License No. R-112
2. Safety Evaluation Report

cc: See next page

DISTRIBUTION:

| | | | |
|----------|------------|----------------|-----------|
| PUBLIC | RidsNrrDpr | RidsNrrDprPrtb | LTran |
| PRTA r/f | GLappert | RidsNrrDprPrta | RidsOgcRp |
| GWertz | | | |

ADAMS Accession No: Pkg: ML120530017; Ltr:ML120530018; App. A (TS):ML120530021; SER:ML120530019

*Concurrence via email NRR-106

| OFFICE | PRLB:PM* | Tech Editor | PRLB:LA | OGC | PRLB:BC |
|--------|----------|-------------|-----------|-----------|------------|
| NAME | GWertz | JDougherty | GLappert | BMizuno | JQuichocho |
| DATE | 3/7/2012 | 3/1/2012 | 3/8/2012 | 3/19/2012 | 4/8/12 |
| OFFICE | DPR:D | NRR:D | PRLB/PM | | |
| NAME | TMcGinty | ELeeds | GWertz | | |
| DATE | 4/12/12 | 4/24/2012 | 4/25/2012 | | |

Reed College

Docket No. 50-288

cc:

Mayor of the City of Portland
1220 Southwest 5th Avenue
Portland, OR 97204

Reed College
ATTN: Dr. Ellen Stauder, Dean of Faculty
3203 S.E. Woodstock Boulevard
Portland, OR 97202-8199

Reed College
ATTN: Dr. Colin Diver, President
3203 S.E. Woodstock Boulevard
Portland, OR 97202-8199

Director
Oregon Department of Energy
625 Marion Street NE
Salem, OR 97301-3737

Program Director
Radiation Control Program
Oregon Health Services
Department of Human Services
800 NE Oregon Street, Suite 640
Portland, OR 97232-2162

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

Enclosure 1

Reed College
Docket No. 50-288
Facility Operating License

ADAMS Accession No. ML120530018

REED COLLEGE

DOCKET NO. 50-288

FACILITY OPERATING LICENSE

License No. R-112

1. The U.S. Nuclear Regulatory Commission (“the Commission”) has found that:
 - A. The application for renewal of Facility Operating License No. R-112 filed by Reed College (“the licensee”), dated August 29, 2007, as supplemented on January 26, July 30, and October 15, 2010, and May 20, August 3, and December 12, 2011, and January 27, and March 26, 2012, (“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 I, of the *Code of Federal Regulations* (10 CFR);
 - B. Construction of the Reed Research Reactor (“the facility”) was completed in substantial conformity with the Construction Permit No. CPRR-101, 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 at the designated location without endangering the health and safety of the public, and (ii) that 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;

- 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 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-112 is hereby renewed in its entirety to read as follows:
- A. This license applies to the Reed Research Reactor (herein "the facility") owned by Reed College (herein "the licensee"), located on the licensee's campus in Portland, Oregon, and described in the licensee's application for license renewal, dated August 29, 2007, as supplemented.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Reed College 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, use, but not separate, in connection with operation of the facility, up to 3600 grams of contained uranium-235 enriched to less than 20 percent in the form of TRIGA fuel;
 - b. to receive, possess, use, but not separate, in connection with operation of the facility, up to 16 grams of contained uranium-235 enriched to any enrichment in the form of nuclear fission chambers or fission foils;
 - c. to receive and possess, but not use or separate, up to 40 grams of uranium-235 enriched to less than 20 percent in the form of demountable TRIGA fuel element number 2898; and
 - d. to receive, possess, use, but not separate, in connection with operation of the facility, such special nuclear material as may be produced by the operation of the facility.

- (3) Pursuant to the Act and 10 CFR Part 30, the following activities are included:
- a. to receive, possess, and use, in connection with the operation of the facility, a 1.64-curie sealed americium-beryllium neutron startup source;
 - b. to receive, possess, and use, but not separate, in connection with operation of the facility, 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 10 CFR Parts 20, 30, 50, 51, 55, 70 and 73 of the Commission's regulations; is subject to all applicable 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 facility at a steady-state power level not in excess of 250 kilowatts (thermal) as specified in the Technical Specifications.
 - (2) Technical Specification

The Technical Specifications contained in Appendix A, as revised through Amendment No. 10, are hereby incorporated 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 amendments and changes made pursuant to the authority of 10 CFR 50.54(p). The approved physical security plan entitled "Physical Security Plan for Reed College Reactor Facility," dated June 1983, submitted by letter dated November 10, 1983, as supplemented by letter dated February 22, 1984, consists of documents withheld from public disclosure pursuant to 10 CFR 2.390(d).

- 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: April 24, 2012