

June 2, 2014

Dr. Timothy W. Koeth, Ph.D.
Assistant Research Professor and Director
Nuclear Reactor and Radiation Facilities
Department of Materials Science and Engineering
University of Maryland
College Park, MD 20742-2115

SUBJECT: UNIVERSITY OF MARYLAND – REQUEST FOR ADDITIONAL INFORMATION
RE: FINANCIAL UPDATE FOR LICENSE RENEWAL FOR THE MARYLAND
UNIVERSITY TRAINING REACTOR (TAC NO. ME1592)

Dear Dr.Koeth:

The U.S. Nuclear Regulatory Commission (NRC) is continuing its review of the University of Maryland (UMD) application for the renewal of Facility Operating License No. R-70, dated May 12, 2000 (a redacted version of the application is available on the NRC's public Web site at www.nrc.gov under Agencywide Documents Access and Management System (ADAMS) Accession No. ML072210862), as supplemented, for the UMD, Maryland University Training Reactor (MUTR).

As required by Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.33(f)(2), “[a]pplicants to renew or extend the term of an operating license for a nonpower reactor shall include the financial information that is required in an application for an initial license.” To comply with this requirement, please provide an update to the supplemental information provided by letter dated May 27, 2010 (ADAMS Accession No. ML101670413). Please provide your response to the enclosed request for additional information within 30 days from the date of this letter.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.30(b), you must execute your response in a signed original document under oath or affirmation. Your response must be submitted in accordance with 10 CFR 50.4, “Written communications.” Information included in your response that is considered sensitive, or proprietary, that you seek to have withheld from the public, must be marked in accordance with 10 CFR 2.390, “Public inspections, exemptions, requests for withholding.” Any information related to security should be submitted in accordance with 10 CFR 73.21, “Protection of Safeguards Information: Performance requirements.” Following receipt of the additional information, we will continue our evaluation of your license renewal request.

T. Koeth

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If you have any questions about this review, or if you need additional time to respond to this request, please contact me by telephone at 301-415-3841 or by electronic mail at Jason.Lising@nrc.gov.

Sincerely,

/RA/

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

Docket No. 50-166
License No. R-70

Enclosure:
Request for additional information

cc: See next page

University of Maryland
cc:

Docket No. 50-166

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

Mr. Roland G. Fletcher Program Manager IV
Radiological Health Program
Maryland Department of Environment
1800 Washington Blvd., Suite 750
Baltimore, MD 21230-1718

Mr. Vincent G. Adams
Facility Coordinator
Chemical and Nuclear Engineering
Building 090
University of Maryland
College Park, MD 20742

Mary J. Dorman
Radiation Safety Officer
Department of Environmental Safety
3115 Chesapeake Building 338
University of Maryland
College Park, MD 20742

Professor Robert Briber
Department of Materials Science and Engineering
University of Maryland
College Park, MD 20742-2115

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

T. Koeth

- 2 -

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Sincerely,

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

Docket No. 50-166
License No. R-70

Enclosure:
Request for additional information

cc: See next page

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ADAMS Accession No.: ML14141A630; *by memo dated NRR-088

OFFICE	DPR/PRLB/PM	DPR/PRLB/LA	DIRS/IFIB (A)BC*	DPR/PRLB/BC	DPR/PRLB/PM
NAME	JLising	PBlechman	GCarpenter (MDusaniwskyj for)	AAdams	JLising
DATE	05/28/2014	05/27/2014	05/16/2014	05/30/2014	06/02/2014

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OFFICE OF NUCLEAR REACTOR REGULATION
REQUEST FOR ADDITIONAL INFORMATION
REGARDING FINANCIAL QUALIFICATIONS FOR THE LICENSE RENEWAL FOR
MARYLAND UNIVERSITY TRAINING REACTOR
LICENSE NO. R-70
DOCKET NO. 50-166

The U.S. Nuclear Regulatory Commission (NRC) is continuing its review of the University of Maryland (UMD) application for the renewal of Facility Operating License No. R-70, dated May 12, 2000 (a redacted version of the application is available on the NRC's public Web site at www.nrc.gov under Agencywide Documents Access and Management System (ADAMS) Accession No. ML072210862), as supplemented, for the UMD, Maryland University Training Reactor (MUTR).

As required by Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.33(f)(2), "[a]pplicants to renew or extend the term of an operating license for a nonpower reactor shall include the financial information that is required in an application for an initial license." To comply with this requirement, please provide an update to the supplemental information provided by letter dated May 27, 2010 (ADAMS Accession No. ML101670413). In some cases, the responses provided in aforementioned letters may not have changed (e.g., requests for additional information 4.(b) and 4.(c)). In that case, please indicate in the response "no change," no additional information is necessary, and the NRC staff will consider the response provided in the submittals to remain current.

1. The NRC staff will analyze the financial statements for the current year, which are required by 10 CFR 50.71(b), to determine if the applicant is financially qualified to operate the MUTR. Since UMD's financial statements included with the application are out of date, provide a copy of the latest financial statements for the NRC staff's review.
2. Pursuant to 10 CFR 50.33(f)(2), the regulation states that "[t]he applicant shall submit estimates for total annual operating costs for each of the first five years of operation of the facility." Since the information included in the application is out of date, provide the following additional information:
 - (a) Projected operating costs of the MUTR for each of the fiscal years (FYs) 2015-2019 (the first five year period after the projected license renewal).
 - (b) Confirm that UMD's primary source of funding to cover the operating costs for the aforementioned FYs will be funding by an annual appropriation from the State of Maryland's budget as described in the application.
3. The RAI response by letter dated May 27, 2010, references a decommissioning cost estimate for the MUTR of \$10,979,000 (2011 dollars). In accordance with 10

Enclosure

CFR 50.75(d)(1) it states that, “[e]ach non-power reactor applicant for or holder of an operating license for a production or utilization facility shall submit a decommissioning report as required by §50.33(k) of this part.” Under 10 CFR 50.75(d)(2) the report must:

(i) Contain a cost estimate for decommissioning the facility; (ii) [i]ndicate which method or methods described in paragraph (e) of this section as acceptable to the NRC will be used to provide funds for decommissioning; and (iii) [p]rovide a description of the means of adjusting the cost estimate and associated level periodically over the life of the facility.

Since the NRC staff needs the following additional information to complete its review of the MUTR application, update the application by providing the following:

- (a) A current decommissioning cost estimate in 2015 dollars for the MUTR to meet the NRC’s radiological release criteria for decommissioning the facility for unrestricted use, pursuant to 10 CFR 50.75(d)(2). Accordingly, describe the basis for how the cost estimate was developed, showing costs, in current dollars, specifically broken down into the categories of labor, waste disposal, other items (e.g., energy, equipment, and supplies), and a 25 percent contingency factor.
 - (b) State the decommissioning method to be used. If SAFSTOR is the proposed method, please state.
 - (c) A description of the means of adjusting the cost estimate and associated funding level periodically over the life of the facility, to comply with 10 CFR 50.75(d)(2)(iii). Also, provide a detailed numerical example showing how the 2015 cost estimate will be adjusted periodically in the future.
4. The application includes a statement of intent (SOI) as the chosen method to provide decommissioning funding assurance for the MUTR. If the applicant intends to use a SOI as the method to provide decommissioning funding assurance, as provided for by 10 CFR 50.75(e)(1)(iv), the NRC staff must find that the applicant “...is a Federal, State, or local government licensee....” To make this finding, the applicant must state that it is a State government organization and that the decommissioning funding obligations of the applicant are backed by the State government, and also provide corroborating documentation. Further, the applicant must provide documentation verifying that the signatory of the SOI is authorized to execute said document that binds UMD. This document may be a governing body resolution, management directives, or other form that provides an equivalent level of assurance. As the application does not include all of the above information, submit the following:
- (a) An updated SOI, which includes the current (2015 dollars) cost estimate for decommissioning; a statement that funds for decommissioning will be obtained when necessary; name and title of signatory; and the signatory’s oath or affirmation attesting to the information.
 - (b) Documentation that corroborates the statement in the application that UMD is a State agency and a State of Maryland government licensee under 10 CFR 50.75(e)(2)(iv).

- (c) A statement as to whether the decommissioning funding obligations for the UMD are backed by the State of Maryland government. The application must also present documentation that corroborates this statement. For example, the documentation may be a copy of or complete citation to a state statute that expressly provides that the obligations, or at least the decommissioning funding obligations, of the applicant are backed or supported by the full faith and credit of the State of Maryland, or an opinion of the applicant's General Counsel with citations to statutes, regulations, and/or case law that the obligations, or at least those with respect to the decommissioning funding of the applicant are obligations backed or supported by the full faith and credit of the State of Maryland.

- (d) Documentation verifying that the signatory of the SOI is authorized to execute such a document that binds the applicant financially. For example, provide a copy of UMD's governing board or equivalent resolution that shows that the signatory of the SOI has been authorized by UMD to bind UMD financially, at least with respect to funding the decommissioning of the MUTR, or provide a copy of an official UMD delegation of authority showing that the signatory of the SOI is authorized to bind UMD financially, at least with respect to funding the decommissioning of the MUTR.