

June 6, 2017

Mr. Ralph A. Butler, Executive Director  
University of Missouri-Columbia  
Research Reactor Center  
1513 Research Park Drive  
Columbia, MO 65211

SUBJECT: UNIVERSITY OF MISSOURI-COLUMBIA RESEARCH REACTOR –  
ACCEPTANCE OF REQUESTED LICENSING ACTION RE: LICENSE  
AMENDMENT REQUEST TO IMPLEMENT SELECTIVE GAS EXTRACTION  
TARGET EXPERIMENTAL FACILITY AT THE UNIVERSITY OF MISSOURI  
RESEARCH REACTOR (CAC NO. MF9524)

Dear Mr. Butler:

By letter dated May 3, 2017 (Agencywide Documents Access and Management System Accession Package No. ML17132A252), the University of Missouri-Columbia Research Reactor submitted a license amendment request (LAR) to produce molybdenum-99 using the General Atomics Selective Gas Extraction process. The purpose of this letter is to provide the results of the U.S. Nuclear Regulatory Commission (NRC) staff's acceptance review of this LAR. The acceptance review was performed to determine if there is sufficient technical information in scope and depth to allow the NRC staff to complete its detailed technical review. The acceptance review is also intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant.

Consistent with Section 50.90 of Title 10 of the *Code of Federal Regulations* (10 CFR), an amendment to the license, including the technical specifications, must fully describe the changes requested, and following as far as applicable, the form prescribed for original applications. Section 50.34 of 10 CFR addresses the content of technical information required. This section stipulates that the submittal address the design and operating characteristics, unusual or novel design features, and principal safety considerations.

The NRC staff has reviewed your LAR and concluded that it does provide technical information in sufficient detail to enable the NRC staff to begin its detailed technical review to make an independent assessment regarding the acceptability of the proposed amendment in terms of regulatory requirements and the protection of public health and safety and the environment.

From our discussions at the NRC public meeting conducted on February 13, 2017, you have requested the NRC staff to expedite this review. Based on the information provided in your LAR, the NRC staff has estimated that this licensing request could be completed in approximately one year. If there are emergent complexities or challenges in our review that would cause changes in the forecasted review period, the reasons for the changes, along with the new completion estimate, will be communicated by me or other NRC staff. A milestone schedule is provided as an enclosure to this letter.

These estimates are based on the NRC staff's initial review of the LAR, and they could change, due to several factors including requests for additional information, unanticipated addition of scope to the review, and review by NRC advisor committees or hearing-related activities.

If you have any questions regarding this review, please contact me at (301) 415-0893 or via electronic mail at [Geoffrey.Wertz@nrc.gov](mailto:Geoffrey.Wertz@nrc.gov).

Sincerely,

***/RA Alexander Adams Acting for/***

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

Docket No. 50-186

Enclosure  
As stated

cc: See next page

cc:

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SUBJECT: UNIVERSITY OF MISSOURI RESEARCH REACTOR – ACCEPTANCE OF REQUESTED LICENSING ACTION RE: LICENSE AMENDMENT REQUEST TO IMPLEMENT SELECTIVE GAS EXTRACTION TARGET EXPERIMENTAL FACILITY AT THE UNIVERSITY OF MISSOURI RESEARCH REACTOR (CAC MF9524) DATED: JUNE 6, 2017

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**ADAMS Accession No.: ML17142A419; \*via e-mail**

**NRR-084**

OFFICE	NRR/PRLB/PM*	NRR/PRLB/LA*	NRR/PRLB/BC	NRR/PRLB/PM
<b>NAME</b>	GWertz	NParker	AAdams	(AAdams for) GWertz
<b>DATE</b>	5/23/17	5/23/17	6/6/17	6/6/17

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MILESTONE SCHEDULE FOR LICENSE AMENDMENT REQUEST BY  
THE UNIVERSITY OF MISSOURI-COLUMBIA RESEARCH REACTOR  
FOR THE PRODUCTION OF MOLYBDENUM-99, PART ONE, INCORE CHANGES  
LICENSE NO. R-103; DOCKET NO. 50-186

The table below provides the NRC staff's initial assessment of the timeframe for completion of the license amendment request based on our review of the application for acceptability for docketing. As noted in the letter, this schedule represents our best estimate, and is subject to change should additional technical review or regulatory actions be necessary.

<b>Key Milestones</b>	<b>Target Completion Dates</b>
Receive License Amendment Request - Part 1	May 2017
Complete Acceptance Review	June 2017
Issue Request for Additional Information (RAI)	September 2017
Issue Supplemental RAI (if necessary)*	December 2017
Complete Draft Safety Evaluation Report	May 2018
Complete Safety Evaluation and Issue License Amendment	June 2018

\* If supplemental RAIs are not necessary, then the schedule can be improved by approximately 2 months.