

August 11, 2016

LICENSEE: UNIVERSITY OF MISSOURI-COLUMBIA RESEARCH REACTOR

SUBJECT: SUMMARY OF JUNE 2, 2016, MEETING WITH UNIVERSITY OF MISSOURI-COLUMBIA RESEARCH REACTOR

On June 2, 2016, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) staff and representatives of the University of Missouri-Columbia Research Reactor (MURR) at NRC Headquarters, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. The purpose of this meeting was to discuss an update to General Atomics' (GA) proposed proprietary selective gas extraction (SGE) process at MURR. A portion of this meeting was closed to the public to discuss proprietary information related to the specifics of design and operation of the proposed project. The meeting notice and agenda, dated June 2, 2016, are available in the Agencywide Documents Access and Management System (ADAMS) Accession No. ML16139B063. A list of meeting attendees is provided as an enclosure.

MURR representatives opened the meeting with an introduction to the molybdenum-99 (Mo-99) production project team, consisting of representatives from GA, MURR, and Nordion. GA will provide targets to MURR for irradiation and processing at the MURR facility using GA's SGE technology. This extract will then be transferred to existing Nordion facilities for further processing and purification. The final Mo-99 product may then be used in any existing technetium-99m generator.

MURR representatives then provided an overview of its facility, which operates 24 hours each day, seven days each week, 52 weeks each year with the support of 175 full-time employees. The 10 megawatts thermal reactor is dedicated to providing education; research and development; and products and services. For the GA Mo-99 project, MURR has proposed to both irradiate and process targets at its facility. Low enriched uranium targets are to be placed in two of the MURR reflector element locations for irradiation. Following irradiation, the targets will be transported to another onsite facility for processing. MURR has proposed to license both of these activities through an amendment to its existing Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," reactor license while meeting applicable requirements of 10 CFR Part 70, "Domestic Licensing of Special Nuclear Material." Within this licensing approach, the GA SGE would be treated as an experiment and those not be considered a material alteration to the facility, which would require a construction permit. This approach also assumes that the processing facility does not meet the definition of a production facility according 10 CFR 50.2, "Definitions." Further details on this discussion are included in the presentation slides (ADAMS Accession No. ML16216A186).

During the closed portion of the meeting, GA went into proprietary-level detail related to the specific design and operation of its proposed Mo-99 production process.

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Please direct any inquiries to me at 301-415-1524 or [Steven.Lynch@nrc.gov](mailto:Steven.Lynch@nrc.gov).

*/RA/*

Steven Lynch, 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: w/enclosure

Please direct any inquiries to me at 301-415-1524 or [Steven.Lynch@nrc.gov](mailto:Steven.Lynch@nrc.gov).

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**ADAMS Accession Nos.: ML16216A695 (Summary); ML16216A186 (Presentation);**  
**\*concurrence via e-mail** **NRC-001**

OFFICE	NRR/DPR/PRLB/PM	NRR/DPR/LA*	NRR/DPR/PRLB/BC	NRR/DPR/PRLB/PM
NAME	SLynch	NParker	(LTran for) AAdams	SLynch
DATE	08/10/2016	08/10/2016	08/10/2016	08/11/2016

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University of Missouri-Columbia

Docket No. 50-186

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## **LIST OF ATTENDEES**

JUNE 2, 2016 MEETING WITH UNIVERSITY OF MISSOURI-COLUMBIA

### RESEARCH REACTOR

1:30 P.M – 3:30 P.M.

<u>Name</u>	<u>Organization</u>
Ralph Butler	University of Missouri Research Reactor
Les Foyto	University of Missouri Research Reactor
Ken Brooks	University of Missouri Research Reactor
Michael Flagg	University of Missouri Research Reactor
Anna Jones	Morgan Lewis
Chris Critch	Nordion
Ronald McGregor	Nordion
Jeff Bartelme	SHINE Medical Technologies, Inc.
Janet Schlueter	Nuclear Energy Institute
Steven Lynch	U.S. Nuclear Regulatory Commission
Linh Tran	U.S. Nuclear Regulatory Commission
Ossy Font	U.S. Nuclear Regulatory Commission
Michael Balazik	U.S. Nuclear Regulatory Commission
Bill Rautzen	U.S. Nuclear Regulatory Commission
Mitzi Young	U.S. Nuclear Regulatory Commission
Patrick Isaac	U.S. Nuclear Regulatory Commission
Alexander Adams	U.S. Nuclear Regulatory Commission
Mirela Gavrilas	U.S. Nuclear Regulatory Commission
Eben Allen	U.S. Nuclear Regulatory Commission
Carl Weber	U.S. Nuclear Regulatory Commission
Hilary Lane	U.S. Nuclear Regulatory Commission
Ed Helvenston	U.S. Nuclear Regulatory Commission
Geoffrey Wertz	U.S. Nuclear Regulatory Commission
Yawar Faraz	U.S. Nuclear Regulatory Commission
Rui Li	U.S. Nuclear Regulatory Commission
Robert Johnson	U.S. Nuclear Regulatory Commission
Patricia Pelke	U.S. Nuclear Regulatory Commission
Jenny Weil	U.S. Nuclear Regulatory Commission
Dan Barss	U.S. Nuclear Regulatory Commission
Alex Sapountzis	U.S. Nuclear Regulatory Commission
Mike Rodriguez	U.S. Nuclear Regulatory Commission
Cathy Kanatas	U.S. Nuclear Regulatory Commission

Enclosure