

August 20, 2012

MEMORANDUM TO: Doug Weaver, Deputy Director  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

FROM: William Allen, Project Manager */RA/*  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

SUBJECT: SUMMARY OF JULY 11, 2012, MEETING WITH UNIVERSITY OF  
MISSOURI RESEARCH REACTOR REGARDING AUTHORIZING  
TYPE B SHIPMENTS IN EXPIRED PACKAGES (TAC NO. L24657)

Background. On July 11, 2012, a meeting was held in Rockville, Maryland, at the request of the Nuclear Regulatory Commission (NRC) to discuss renewing authorization for University of Missouri Research Reactor (MURR) to ship Type B quantities of radioactive material in expired Department of Transportation (DOT) Specification 6M and 20WC-1 packages. Regulatory decisions were neither requested nor made at the meeting. The list of meeting attendees is Enclosure 1. A detailed agenda provided by NRC for the meeting is Enclosure 2. NRC presentation slides are Enclosure 3. MURR presentation slides are Enclosure 4.

Discussion. The discussion followed the agenda provided in Enclosure 2. Michael Waters, the Spent Fuel Storage and Transportation Licensing Branch Chief, provided a brief background of Regulatory Information Summary 2008-18 as well as identified other entities with whom the NRC has authorized extended use of expired packages. After the NRC completed its presentation, Michael Flagg, the Licensing Specialist for MURR, commenced the presentation for MURR.

A brief overview of MURR, what they produce and the annual number of radioactive material shipments was given. A history of the effort expended by MURR in obtaining replacement packages for both the 6M and 20WC-1 packages; e.g., sending out multiple bids, considering designing own package, etc., as well as the associated cost and challenges followed. MURR identified that a vendor was eventually located to design two packages: the SAFKEG-LS and the SAFKEG-HS. MURR indicated that in addition to the SAFKEG-HS, which is a heavily shielded package, a more lightly shielded package, the SAFKEG-LS, was needed to ship some isotopes overnight. When queried about using existing package designs, either domestic or foreign, MURR indicated that these had been considered, but none fit their needs either because of weight concerns or because the isotopes produced by MURR were not allowable contents. MURR then discussed not only their current schedule for deploying the SAFKEG-LS, for which a Certificate of Compliance was issued in January 2011, but also the reasons a Safety Analysis Report (SAR) had not been submitted for the SAFKEG-HS.

Next, MURR briefly outlined the information required by Regulatory Information Summary 2008-18 in order to extend the use of expired packages. In addition, they identified the current status of both the special permit issued by the DOT and the NRC authorization letter which allows MURR to ship Type B quantities of radioactive material in the DOT Specification 6M and 20WC-1 packages. MURR also identified isotopes currently shipped under the DOT special permit and the NRC authorization letter as well as their uses. MURR then stated reasons they believed justified extending the NRC letter of authorization such as increased dose to workers, an inability to reduce the material shipped to a Type A quantity and lack of a replacement package that satisfied their criteria. MURR then proposed to voluntarily reduce the allowable quantity of material to be shipped for two isotopes as well as proposing to remove three isotopes from the allowable contents of the authorization letter once the SAFKEG-LS is operational. MURR concluded their presentation with the potential impacts if authorization to continue shipping Type B quantities of radioactive material was not given.

After the MURR presentation was completed, NRC staff asked several questions. When asked about the possibility of increased exposure and unforeseen handling problems either at MURR or a customer's facility, MURR acknowledged that challenges would arise; however, MURR stated that they have worked, and will continue to work, with their customers to insure the replacement packages are safely utilized. MURR was questioned if additional compensatory measures beyond reducing the quantity of material shipped had been identified. MURR responded that they had been unsuccessful in identifying additional measures, but that they would be very receptive to suggestions. MURR was queried about what the NRC could do to reduce the review time associated with reviewing the SAFKEG-HS SAR once it was submitted. MURR did not have a direct answer to this question, but identified that lessons learned from the review of the SAFKEG-LS had been incorporated into the development of the SAFKEG-HS SAR. MURR was also asked that, if the review time was reduced, would there be a resulting reduction in the fabrication time of the SAFKEG-HS. MURR responded that they could not guarantee a quicker production time. When the public was given the opportunity to ask questions, Tony Werth of Alpha-Omega Services indicated that the package for which they had been given a Certificate of Compliance in July 2011, and which had been identified earlier in the meeting as capable of shipping at least one isotope MURR shipped, would not be ready for delivery until the first quarter of 2013.

The NRC concluded the meeting by noting that they would consider the information presented and that MURR should expect to provide this information in response to a formal Request for Supplemental Information from the NRC. At this point the meeting was adjourned.

Docket Nos. 71-9337, 71-9338, 71-9343  
TAC No. L24657

Enclosures:   1. Attendees  
                  2. Agenda  
                  3. NRC Presentation Slides  
                  4. MURR Presentation Slides

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Distribution: NRC Attendees

Filename: G:\SFST\Allen\Part 71\9343 (MURR)\Public Meeting\Meeting Summary.doc

**ADAMS P8 Package No.: ML12234A217    Memo ML No.: ML12234A254**

<b>OFC:</b>	SFST		SFST		SFST	
<b>NAME:</b>	WAllen		MdeBose		MWaters	
<b>DATE:</b>	8/20/12		8/20/12		8/20/12	

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MEETING ATTENDEES  
Public Meeting Between University of Missouri Research Reactor  
and Nuclear Regulatory Commission  
July 11, 2012

<b>NAME</b>	<b>AFFILIATION</b>
Chris Allen	NRC/SFST
Michael Waters	NRC/SFST
Pierre Saverot	NRC/SFST
Jim Pearson	NRC/SFST
Ashley Cockerham (via teleconference)	NRC/FSME
Marcus Nichol	NEI
Michael Flagg	MURR
Ralph Butler	MURR
John Ernst	MURR
Craig Stevenson	MURR
Lynne Fairobent (via teleconference)	American Association of Physicists in Medicine
Susan Langhorst (via teleconference)	ACMUI
Steve Mattmuller (via teleconference)	ACMUI
Mary Muesle	NRC/NRR
Greg Bowman	NRC/NRR
Jim Williams	DOT
David Pstrak	NRC/SFST
Kim Hardin	NRC/SFST
Jesse Quichocho	NRC/NRR
Mark Lombard	NRC/SFST
Michael Waters	NRC/SFST
Bob Tripathi	NRC/SFST
Jimmy Chang	NRC/SFST

## AGENDA

### Discuss Use of Expired Packages

Public Meeting Between University of Missouri Research Reactor  
and Nuclear Regulatory Commission  
July 11, 2012

- Introduction/Opening Remarks
- Discussion of Regulatory Background
- Discussion of Information Required by RIS 2008-18
- MURR Presentation
- Closing Remarks
- Adjourn

NRC Presentation Slides

MURR Presentation Slides