

UNITED STATES OF AMERICA  
 NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

In the Matter of )  
 )  
 SHINE MEDICAL TECHNOLOGIES, INC. ) Docket No. M-50-608-CP  
 )  
 (Medical Radioisotope Production Facility) )  
 )

NRC STAFF RESPONSES TO POST-HEARING QUESTIONS

Pursuant to the Commission Order (Transmitting Post-Hearing Questions), dated December 21, 2015, the U.S. Nuclear Regulatory Commission (NRC) staff (Staff) hereby responds to the questions posed by that Order.

Respectfully submitted,


**/Signed (electronically) by/**

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**Executed in accord with 10 CFR 2.304(d)**

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Dated at Rockville, Maryland  
 this 29th day of December, 2015

	
In the Matter of: SHINE MEDICAL TECHNOLOGIES, INC. (Medical Radioisotope Production Facility)	United States Nuclear Regulatory Commission Official Hearing Exhibit Commission Mandatory Hearing
Docket #: 05000608 Exhibit #: NRC-014-MA-CM01 Admitted: 01/14/2016 Rejected: Other:	Identified: 12/29/2015 Withdrawn: Stricken:

## **NRC STAFF RESPONSES to POST-HEARING QUESTIONS**

- 1. Please provide an estimate of the total number of hours the Staff spent reviewing the application for a construction permit from SHINE Medical Technologies and engaging in other activities directly in support of this review.**

**Staff Response:** The Staff spent approximately 16,000 hours reviewing the SHINE construction permit application and engaging in other activities directly in support of this review. Review and support activities included: the technical review, including the development of requests for additional information, the Safety Evaluation Report, and the Environmental Impact Statement; project management; participation in public meetings; regulatory analysis and correspondence; and rule development. In addition, contractors provided approximately 6,000 hours in support of the Staff's review.

- 2. In its response to pre-hearing Question 41, SHINE described the bulk effects of a dilution event caused by a breach between the target solution vessel and the primary closed-loop cooling system. Has SHINE considered what would happen locally at the leak location? How would this affect the local reactivity until the solution is well mixed? Will the SHINE leak detection systems identify a slow leak in a reasonable time?**

**Staff Response:** None. This question was directed to the Applicant.

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CERTIFICATE OF SERVICE

Pursuant to 10 C.F.R. § 2.305, I hereby certify that copies of the foregoing "NRC STAFF RESPONSES TO POST-HEARING QUESTIONS," dated December 29, 2015, have been served upon the Electronic Information Exchange, the NRC's E-Filing System, in the above-captioned proceeding, this 29th day of December, 2015.

**/Signed (electronically) by/**

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