A. 10 CFR 35.633(a) states, in part, that a licensee authorized to use a remote afterloader unit for medical use shall perform full calibration measurements on each unit before medical use following any repair of the unit that includes removal of the source or major repair of the components associated with the source exposure assembly.

Contrary to the above, on July 8, 2019, and July 11, 2019, the licensee was authorized to use a remote afterloader unit for medical use and did not perform full calibration measurements following repair of the unit that included removal of the source and major repair of the components associated with the source exposure assembly. Specifically, on July 8 and 11, 2019, the source was removed from the unit and major repairs were conducted on the unit that involved the source exposure assembly

This is a Severity Level IV violation (NRC Enforcement Policy, Section 6.3).

Corrective actions included revising the remote afterloader manual to require the authorized medical physicist to determine if the source was removed or if major repairs were made to the source exposure assembly during service and if so, recalibrate the unit. Additionally, the licensee's procedures require the radiation oncology department to contact the radiation safety department when non-routine maintenance and re-calibrations are performed so that the radiation safety department can provide oversight of the work.

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NRC FORM 591M PART 1

(07-2012) 10 CFR 2.201 U.S. NUCLEAR REGULATORY COMMISSION

## SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE/LOCATION INSPECTED

West Virginia University Hospitals, Inc.

Medical Center Drive Morgantown, WV 26506 2. NRC/REGIONAL OFFICE

Region 1

2100 Renaissance Blvd

Suite 100

King of Prussia, PA 19406-2713

REPORT NUMBER(s) 2020001

3. DOCKET NUMBER(S)

4. LICENSE NUMBER(S)

030-20233 47-23066-02

5. DATE(S) OF INSPECTION

10/27/2020 - 10/28/2020, in office

review through 12/7/2020

B.10 CFR 35.60(b) states, in part, a licensee shall calibrate the instrumentation required in 10 CFR 35.60(a) in accordance with nationally recognized standards or the manufacturer's instructions.

Contrary to the above, on November 5, 2019, the licensee did not calibrate the instrumentation required in 10 CFR 35.60(a) in accordance with nationally recognized standards or the manufacturer's instructions. Specifically, the licensee failed to perform a geometric independence test for a 30 milliliter vial, used for Lu-177 and Y-90 therapy treatments, upon reinstallation of the dose calibrator on November 5, 2019, as required by the manufacturer's instructions. Furthermore, as of October 27, 2020, the licensee failed to establish the appropriate calibration setting number for Lu-177 and Y-90 measured in 30 milliliter glass vials, as required by the manufacturer's instructions.

This is a Severity Level IV violation (NRC Enforcement Policy, Section 6.3).

Corrective actions included performing the necessary geometric independence testing and establishing the appropriate calibration setting numbers for Lu-177, Y-90 SIR-Spheres, and Y-90 TheraSpheres. Additionally, the licensee created a procedure and checklist to ensure that all required tests are performed upon reinstallation, repair, or relocation of the dose calibrators.

## **Statement of Corrective Actions**

I hereby state that, within 30 days, the actions described by me to the Inspector will be taken to correct the violations identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to NRC will be required, unless specifically requested.

TITLE	PRINTED NAME	SIGNATURE	DATE
LICENSEE'S REPRESENTATIVE	Nathan Burt, VP Operations	Wath FXI	12/21/2020
NRC INSPECTOR	Penny Lanzisera	Penny A. Lanzisera Digitally signed b	y Penny A. Lanzisera 10:10:38 -05'00'
BRANCH CHIEF	Donna M. Janda		