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:	2. NRC/REGIONAL OFFICE
Lester E. Cox Medical Center 3850 S. National Ave., Springfield, MO 65807 & 3801 S. National Ave., Springfield, MO 65807 REPORT NUMBER(S) 2020001	Region III U. S. Nuclear Regulatory Commission 2443 Warrenville Road, Suite 210 Lisle, IL 60532-4352

3. DOCKET NUMBER(S)	4. LICENSE NUMBER(S)	5. DATE(S) OF INSPECTION
030-09784	24-01143-06	1/15,16/2020

LICENSEE:

The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

☑ 1. Based on the inspection findings, no violations were identified.

☐ 2. Previous violation(s) closed.

☐ 3. The violations(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy, to exercise discretion, were satisfied.

_____ Non-cited violation(s) were discussed involving the following requirement(s):

☐ 4. During this inspection, certain of your activities, as described below and/or attached, were in violation of NRC requirements and are being cited in accordance with NRC Enforcement Policy. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.
(Violations and Corrective Actions)

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			
NRC INSPECTOR	Robert G. Gattone, Jr.	Robert G. Gattone, Jr.	1/31/2020
BRANCH CHIEF	Robert Ruiz	/RA Blame for R Ruiz/	1/31/2020

NRC FORM 591M PART 3
(07-2012)
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6. INSPECTION PROCEDURES USED	7. INSPECTION FOCUS AREAS
87132	03.01 through 03.07

SUPPLEMENTAL INSPECTION INFORMATION

1. PROGRAM CODE(S)	2. PRIORITY	3. LICENSEE CONTACT	4. TELEPHONE NUMBER
02230	2	Kimberly Bradley Prescott, M.S. RSO	(417) 368-6325

☑ Main Office Inspection Next Inspection Date: 01/15/2022

☐ Field Office Inspection

☐ Temporary Job Site Inspection

PROGRAM SCOPE

This was a routine, unannounced inspection of a large medical center that used material described in 10 CFR Part 35 for diagnostic studies, and radiopharmaceutical and sealed source therapeutic procedures. The licensee employed six fulltime certified nuclear medicine technologists (CNMT) at 3801 South National Ave, where an average of 15 diagnositc studies were performed each day, and an average of five iodine-131 therapy, three yttrium-90, and Xofigo studies were done on a monthly basis. The nuclear medicine department included four imaging rooms, one stress lab, and one hot lab. At 3850 South National Ave., the licensee conducted sealed source therapy, including approximately 12 high dose rate remote (HDR) afterloader therapy procedures per week.

The inspector: (1) observed how the licensee conducted HDR spot checks; (2) noted that the HDR treatment room had the proper safety features (e.g., electrical interlock, a video camera and an intercom for monitoring HDR patients during HDR treatments, and a switch to prevent HDR radiation and an x-ray unit radiation simultaneously); (3) observed selected survey meters and they were calibrated as required; (4) observed licensed material secured as required; (5) observed proper emergency tools to respond to an emergency (e.g., the HDR source is stuck in the patient's body); (6) reviewed selected HDR treatments (i.e., written directives, patient anatomy images overlayed with dose information for treatment plans, and documents showing that the HDR unit was programmed to execute the treatment plans; (7) reviewed manual brachytherapy documents involving Cesium-137 sealed sources for gynecological treatments and Iodide-125 sealed sources for prostate treatments; (8) noted that the licensee used three means of verifying the patients' identity, including a "time out"; (9) reviewed selected records of leak tests and inventories for Cesium-137 sealed sources; (10) noted that the licensee conducted a post treatment ambient exposure rate survey of the patients' bodies to verify that the Cesium-137 sealed sources are not in the patients' bodies prior to releasing the patient; (11) reviewed selected Radiation Safety Committee Meeting Minutes; (12) reviewed dosimeter badge dose records for 2018, 2019, and 2020 (through 1/7/2020) and the doses were well below the occupational overexposure limit; (13) reviewed selected ALARA audit records; (14) noted that the licensee conducted dose calibrator calibrations; (15) noted that the licensee has the HDR vendor to repair the HDR unit;

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PROGRAM SCOPE

(16) noted that the licensee conducted Y-90 SIR SPHERES treatments, involving post treatment SPECT/CT imaging of the patient as a means of determining where the Y-90 SIR SPHERES went into the patients' bodies; (17) reviewed selected records regarding Xofigo treatments, Y-90 SIR SPHERES treatments, Iodine-131 for thryroid ablation and hyperthyroid treatments; (18) reviewed records showing that the licensee provided patient instructions to prevent radiation dose to members of the public; (19) observed a nuclear medicine technologist (NMT) demonstrate how he administered licensed material by way of intravenous and oral; (20) observed an NMT implementing actions for a received package containing licensed material; (21) noted that the licensee conducted ambient exposure rate surveys of staff before leaving the surgery room after treating a Y-90 SIR SPHERES patient; (22) observed an NMT conducting ambient exposure rate, pre-treatment surveys and post-treatment surveys to determine how much Y-90 SIR SPHERES were in the patients' bodies; and (23) observed NMTs using safe use of unsealed licensed material.

1/31/2020