

**SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION**

1. LICENSEE/LOCATION INSPECTED:  SSM Health DePaul Hospital - St. Louis  12303 DePaul Dr. Bridgeton, MO 63044  REPORT NUMBER(S) 2019001		2. NRC/REGIONAL OFFICE  Region III U. S. Nuclear Regulatory Commission 2443 Warrenville Rd, Suite 210 Lisle, IL 60532	
3. DOCKET NUMBER(S)  030-02308	4. LICENSE NUMBER(S)  24-02490-03	5. DATE(S) OF INSPECTION  August 13 & 14, 2019	

**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 violation(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	Zahid Sulaiman, Health Physicist	<i>Zahid Sulaiman</i>	8/14/19
BRANCH CHIEF	Aaron T. McCraw, Chief, MIB	<i>A. T. McCraw</i>	9/6/19

**Docket File Information**

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6. INSPECTION PROCEDURES USED  87131, 87132		7. INSPECTION FOCUS AREAS  03.01 - 03.07	

**SUPPLEMENTAL INSPECTION INFORMATION**

1. PROGRAM CODE(S)  02230	2. PRIORITY  2	3. LICENSEE CONTACT  Wallace O, Fuhrman, RSO	4. TELEPHONE NUMBER  (636) 496-2858
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- Main Office Inspection      Next Inspection Date: 08/13/2021
- Field Office Inspection    St. Joseph Hospital, Lake St. Louis, MO
- Temporary Job Site Inspection \_\_\_\_\_

**PROGRAM SCOPE**

This was a routine inspection of a 400-bed hospital, authorized under NRC license to use byproduct materials for medical uses permitted by 10 CFR 35.100, 35.200, 35.300, 35.400, and 35.600. The nuclear medicine department was staffed with three full-time and four PRN nuclear medicine technologists (NMTs) who performed approximately 240 diagnostic nuclear medicine procedures monthly. The licensee also performed approximately 3 radium-223 Xofigo and 50-70 iodine-131 (capsules form) therapeutic procedures annually.

The radiation oncology department at the main hospital was staffed with an oncologist, two dosimetrists, and an authorized medical physicist (AMP) who performed approximately 5 iodine-131 thyroid ablations and 10 high dose rate brachytherapy (HDR), mostly gynecological cancer treatments annually. The St. Joseph Hospital cancer care center was staffed with 2 oncologists, a dosimetrist, and an AMP who performed approximately 30-40 iodine-125 (I-125) prostate seed implants annually.

**Performance Observations:**

This inspection consisted of interviews with select licensee's staff and management and tours of the nuclear medicine, radiation oncology department, and cancer care center. The inspector observed preparation and administration of technetium-99 diagnostic doses to two patients. At the cancer care center, the inspector observed a I-125 prostate seed implant procedure performed by an authorized user using an approved pre-treatment plan, with no issues noted. The inspector: (1) observed the NMT conduct a physical inventory of sealed sources and all sources were accounted for; and (2) had the NMT demonstrated the dose calibrator constancy check, package receiving and check-in procedures, the end of the day daily and weekly area surveys, and proper handling of radioactive waste and disposal procedures.

At the oncology department, the inspector had the AMP demonstrate the HDR unit's: (1) security, (2) daily spot checks, (3) emergency equipment and procedures, (4) safety procedures and instructions, (5) door interlock system, and (6) radiation monitoring equipment checks.

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(Continued)

The inspector reviewed written directives and treatment plans for various brachytherapy and radiation therapy procedures. Interviews with licensee personnel indicated adequate knowledge of radiation safety, emergency procedures, and NRC regulations.

The inspector reviewed the following records: RSC minutes, quarterly program audits, package receipts, waste disposal records, radiation safety and DOT Hazmat training, linearity and accuracy of the dose calibrator, instrument calibration, sealed source leak tests, daily area surveys, and weekly wipe tests.

The inspector also reviewed dosimetry records for 2018 and through June 30, 2019, indicating the maximum annual dose to be 789 mrem DDE, and 723mrem- SDE. The inspector conducted independent and confirmatory radiation surveys and found no residual contamination or exposures to members of the public in excess of regulatory limits.

No violations of NRC requirements were identified during this inspection.