

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

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| <p>1. LICENSEE/LOCATION INSPECTED:</p> <p>Lake Regional Health System 54 Hospital Drive Osage Beach, MO 65065</p> <p>REPORT NUMBER(S) 2018001</p> | <p>2. NRC/REGIONAL OFFICE</p> <p>Region III U. S. Nuclear Regulatory Commission 2443 Warrenville Road, Suite 210 Lisle, IL 60532-4352</p> | |
| <p>3. DOCKET NUMBER(S)</p> <p>030-14028</p> | <p>4. LICENSE NUMBER(S)</p> <p>24-18678-01</p> | <p>5. DATE(S) OF INSPECTION</p> <p>October 19 - November 16, 2018</p> |

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:

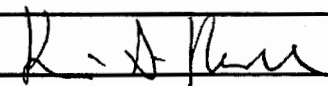
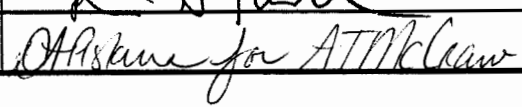
- 1. Based on the inspection findings, no violations were identified.
- 2. Previous violation(s) closed.
- 3. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is 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 | Kevin G. Null |  | 11/20/2018 |
| BRANCH CHIEF | Aaron T. McCraw |  | 11/21/18 |

Docket File Information
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|--------------------------------------------|--------------------------------------|
| 6. INSPECTION PROCEDURES USED 87130 | 7. INSPECTION FOCUS AREAS All |
|--------------------------------------------|--------------------------------------|

SUPPLEMENTAL INSPECTION INFORMATION

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|--------------------------------|----------------------|------------------------------------------------------------|-------------------------------------------|
| 1. PROGRAM CODE(S) 2121 | 2. PRIORITY 5 | 3. LICENSEE CONTACT Daniel Canales, Dir. of Imaging | 4. TELEPHONE NUMBER (573) 348-8347 |
|--------------------------------|----------------------|------------------------------------------------------------|-------------------------------------------|

Main Office Inspection Next Inspection Date: 10/19/2023

Field Office Inspection _____

Temporary Job Site Inspection _____

PROGRAM SCOPE

This was a routine, unannounced inspection of a medical facility that was authorized under NRC Materials License No. 24-18678-01 to use licensed material permitted in 10 CFR Part 35, Sections 35.100 and 35.200. Additional inspection time through November 16 was needed to review dosimetry data, as well as a number of radiation protection procedures referenced in the licensee's NRC license. The licensee employed four full-time certified nuclear medicine technologists (CNMT's), received unit doses from a local radiopharmacy, and conducted an average of 10 diagnostic studies each day. The majority of the procedures were cardiac, gall bladder, and bone imaging studies. The licensee had one hot lab and three imaging suites, and contracted with a health physics consultant who conducted audits of the licensee's radiation protection program on a quarterly basis. Positron emission tomography (PET) studies were provided by an independent mobile PET service.

PERFORMANCE OBSERVATIONS

The inspector toured the licensee's nuclear medicine department, observed licensed activities, interviewed three CNMT's and the Director of Imaging, and reviewed a selection of records pertaining to the licensee's radiation protection program. The inspector observed the use of personal protective equipment including laboratory coats, gloves, syringe shields, and whole body and extremity dosimetry. A CNMT described package receipt and survey procedures, including thresholds for radiation levels and removable contamination. The inspector also observed two CNMT's perform a physical inventory of sealed sources. All sources were accounted for.

The inspector reviewed a selection of records including results of sealed source leak-testing, package and area surveys for radiation levels and removable contamination, personal dosimetry, refresher training, daily dose calibrator constancy checks, and consultant audit reports. Using a Thermo Scientific RadEye G survey meter calibrated on July 30, 2018, the inspector conducted independent surveys in the hot lab and imaging suites. Radiation levels ranged from 0.05 mRem/hour (background) – 0.30 mRem/hour (hot lab).

No violations of NRC requirements were identified.

[Handwritten signature]
11/21/2018