

## SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

## 1. LICENSEE/LOCATION INSPECTED:

Henry Ford Macomb Hospital  
15855 Nineteen Mile Road  
Clinton Township, MI 48038

## 2. NRC/REGIONAL OFFICE

Region III  
U. S. Nuclear Regulatory Commission  
2443 Warrenville Rd, Suite 210  
Lisle, IL 60532

REPORT NUMBER(S) 16-001

## 3. DOCKET NUMBER(S)

030-02106

## 4. LICENSE NUMBER(S)

21-11850-01

## 5. DATE(S) OF INSPECTION

March 2, 2016

## 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:

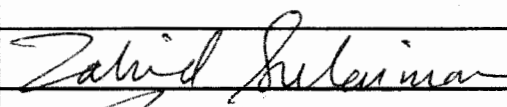
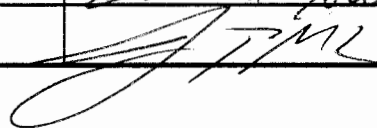
- ☒ 1. Based on the inspection findings, no violations were identified.
- ☐ 2. Previous violation(s) closed.
- ☐ 3. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was 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		3/2/16
BRANCH CHIEF	Aaron T. McCraw, Chief, MIB		3/22/16

**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

Alan J. Jackson, M.S., RSO

4. TELEPHONE NUMBER

(586) 263-2400

☒ Main Office Inspection

Next Inspection Date: 03/02/2018

☐ Field Office Inspection

☐ Temporary Job Site Inspection

**PROGRAM SCOPE**

This was a routine inspection of a 600+ 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 two part-time nuclear medicine technologists (NMT) and two PRNs who performed approximately 400 diagnostic nuclear medicine procedures monthly. The licensee received unit doses, bulk Tc-99m, and I-131 capsules from a licensed radiopharmacy. Doses were primarily Tc-99m for cardiac, bone scan, thyroid, MUGA, lung scan using Xe-133, gastric emptying and other studies. The nuclear medicine department performed approximately five I-131 therapy procedures monthly.

The radiation oncology department was staffed with two full-time oncologists, three authorized medical physicist (AMP) and three contingency AMPs. The licensee conducts approximately 120 high dose rate brachytherapy (HDR) patient treatments per year. The majority of treatments conducted were for breast, gynecological, and prostate cancers. The HDR sources were exchanged quarterly, with the most recent source received was in February 11, 2016. The licensee conducts two to three manual brachytherapy treatments using I-125 permanent prostate implants annually.

**Performance Observations:**

The inspector: (1) observed one HDR gynecological treatment procedure and an administration of Tc-99m diagnostic dose to a patient; (2) observed the NMT conduct a physical inventory of sealed sources and all sources were accounted for; (3) 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. The inspector reviewed radiation safety committee minutes and program audits conducted by an outside consultant every quarter, with no findings. The inspector had the AMP demonstrate the HDR unit's: (1) security of licensed material; (2) daily spot checks; (3) emergency equipment and procedures; (4) safety procedures and instructions; (5) door interlock system; and (6) radiation monitoring equipment. The inspector reviewed two manual brachytherapy and five HDR written directives and treatment plans, with no issues noted. The inspector reviewed dosimetry records for 2014, and 2015, indicating the maximum annual dose to be 153 mrem - DDE, and 780 mrem - SDE, and performed independent radiation measurements of the hot lab, imaging, and stress room areas that were consistent with the licensee's survey results and within regulatory limits.

No violations of NRC requirements were identified during this inspection.