

**SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION**

1. LICENSEE/LOCATION INSPECTED:

Munson Medical Center  
1105 Sixth Street  
Traverse City, MI 49684

REPORT NUMBER(S) 2018001

2. NRC/REGIONAL OFFICE

Region III  
U. S. Nuclear Regulatory Commission  
2443 Warrenville Road, Suite 210  
Lisle, IL 60532-4352

3. DOCKET NUMBER(S)

030-02074

4. LICENSE NUMBER(S)

21-08317-01

5. DATE(S) OF INSPECTION

May 15+16, 2018

**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:

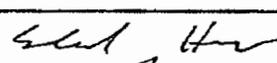
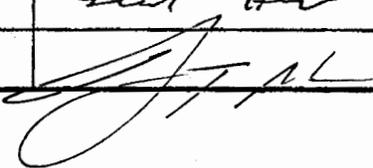
- 1. Based on the inspection findings, no violations were identified.
- 2. Previous violation(s) closed.
- 3. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is 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	Edward F. Harvey		5/16/18
BRANCH CHIEF	Aaron T. McCraw		6/6/18

**Docket File Information**  
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<p>3. DOCKET NUMBER(S)</p> <p>030-02074</p>	<p>4. LICENSE NUMBER(S)</p> <p>21-08317-01</p>	<p>5. DATE(S) OF INSPECTION</p> <p>May 15 &amp; 16, 2018</p>
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<p>6. INSPECTION PROCEDURES USED</p> <p>87131 &amp; 87132</p>	<p>7. INSPECTION FOCUS AREAS</p> <p>All</p>
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**SUPPLEMENTAL INSPECTION INFORMATION**

<p>1. PROGRAM CODE(S)</p> <p>02240</p>	<p>2. PRIORITY</p> <p>2</p>	<p>3. LICENSEE CONTACT</p> <p>Dennis J. Aurand, RSO</p>	<p>4. TELEPHONE NUMBER</p> <p>(231) 935-7100</p>
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Main Office Inspection      Next Inspection Date: May 15, 2020

Field Office Inspection    See Part 2

Temporary Job Site Inspection

**PROGRAM SCOPE**

This was a routine inspection of a large health system authorized to use byproduct materials for medical uses permitted by 10 CFR 35.100, 35.200, 35.300, 35.400, 35.600, and 35.1000 at its main hospital in Traverse City. The licensee also performed diagnostic medical procedures at five other locations listed on the license. The nuclear medicine department at the main hospital was staffed with five full-time NMTs who performed approximately 15 diagnostic administrations per day. The nuclear medicine department also performed approximately four therapeutic administrations of I-131 and one administration of Ra-223 dichloride per month. The licensee received unit doses, bulk Tc-99m, and I-131 in capsule form from a licensed radiopharmacy. The licensee also conducted approximately five Y-90 TheraSphere treatments per year.

The brachytherapy suite was located within the main hospital. The licensee conducted approximately 30-40 I-125/Pd-103 permanent prostate implants and approximately 80 high dose-rate brachytherapy (HDR) patient treatments per year. The majority of the HDR treatments conducted were for gynecological and prostate cancers. The licensee also performed approximately two intravascular brachytherapy procedures per month using Sr-90 for coronary in-stent restenosis. Although authorized, the licensee has not yet performed any localization studies for non-palpable lesions.

The Heart & Vascular Center in Traverse City was staffed with two full time NMTs who performed approximately seven cardiac stress tests per day. The hospital in Cadillac was staffed with two NMTs who performed approximately seven diagnostic procedures per day. Although authorized, the Cadillac location has not performed permanent seed implants for several years.

At the main hospital and Cadillac locations, the inspector observed nuclear medicine staff perform package receipt and surveying procedures, daily dose calibrator constancy checks, daily surveys, and waste disposal procedures. In addition, the inspector observed several administrations of doses for a cardiac stress tests and a gall bladder study. The inspector noted that the NMTs wore the appropriate personal protective equipment, assayed the doses, and verified patient identity prior to administering the doses. The nuclear medicine staff also demonstrated adequate knowledge of radiation protection principles and emergency procedures through interviews with the inspector.

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(Continued)

In the brachytherapy suite, the inspector observed the the second of three fractions of an HDR treatment. The inspector also observed the licensee staff perform the required daily checks, verify the treatment plan, and verify patient identity prior to the treatment. The inspector noted that the licensee performed surveys of the patient both before and after the treatment to ensure that the source had returned to the shielded position.

The inspector was unable to observe licensed activities at the Heart & Vascular Center in Traverse City because all administrations had been completed for the day. Instead, the inspector observed nuclear medicine staff demonstrate package receipt and surveying procedures, daily dose calibrator constancy checks, and daily surveys. The nuclear medicine staff also demonstrated adequate knowledge of radiation protection principles and emergency procedures through interviews with the inspector.

The inspector reviewed a selection of licensee records, including written directives, treatment plans, quarterly audits, source inventories, survey meter calibration records, package receipt logs, dosimetry, and RSC meeting minutes with no issues noted. In addition, the inspector performed independent surveys, which revealed no readings that would indicate residual contamination or exposures to members of the public in excess of regulatory limits.

No violations of NRC requirements were identified during this inspection.

Field Locations Inspected:

Brachytherapy Suite, Munson Medical Center, 1105 Sixth Street, Traverse City, Michigan

1200 Sixth Street, Suite 200, Traverse City, Michigan (Heart & Vascular Center)

400 Hobart Street, Cadillac, Michigan