

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE/LOCATION INSPECTED: Marquette General Helath System 580 West College Marquette, MI 49855-2705 REPORT NUMBER(S) 2011-001		2. NRC/REGIONAL OFFICE Region III U. S. Nuclear Regulatory Commission 2443 Warrenville Road, Suite 210 Lisle, IL 60532-4352	
3. DOCKET NUMBER(S) 030-18133	4. LICENSE NUMBER(S) 21-05432-04	5. DATE(S) OF INSPECTION 09/20/2011 -10/13/2011	

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	Ken Lambert	<i>Ken Lambert</i>	10/14/11
BRANCH CHIEF	Tamara Bloomer	<i>Tamara Bloomer</i>	10/14/11

Docket File Information
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6. INSPECTION PROCEDURES USED 87131, 87	7. INSPECTION FOCUS AREAS 03.01-03.08
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SUPPLEMENTAL INSPECTION INFORMATION

1. PROGRAM CODE(S) 2240	2. PRIORITY 2	3. LICENSEE CONTACT Shan Marlette, RSO	4. TELEPHONE NUMBER (906) 225-6967
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Main Office Inspection Next Inspection Date: 10/2013
 Field Office Inspection
 Temporary Job Site Inspection

PROGRAM SCOPE

The licensee was a large hospital that served Marquette, Michigan and the surrounding area. The licensee was authorized to perform diagnostic and therapeutic nuclear medicine, PET studies, and yttrium-90 SIR-Spheres for liver cancer treatments. The licensee possessed cesium-137 brachytherapy sources, but the last treatment was in December 2008. The licensee receives a Mo-99Tc-99m generator weekly for diagnostic studies that include bone (321/year); lung (99/year); gastric emptying (65/year); cardiac (1600/year). The licensee performs thyroid treatments administering iodine-131 in capsule form and performs approximately 30 ablations/year using greater than 100 mCi of I-131 and 52 hyperthyroid treatments using 15-20 mCi of I-131. The licensee also performs approximately 950 PET diagnostic scans/year using flourine-18. The licensee employes 5 full time technologists who rotate between PET, nuclear medicine, and the cardiac stress lab.

PERFORMANCE OBSERVATIONS

The inspector noted that the licensee's hot labs were under constant surveillance during the inspection due to the configuration of the patient imaging areas. Licensee staff indicated that after hours the hot lab and department doors were locked and the hot lab door was also locked when no one was in the department. The inspector observed several injections including cardiac stress tests. Licensee staff were knowledgeable and discussed or demonstrated package receipt surveys, daily surveys, weekly wipes and spill procedures, inventory, leak tests, waste disposal, security and storage of licensed materials. Dose calibrator checks were performed as required and included daily constancy, quarterly linearity and annual accuracy tests. The well counter and thyroid probe were calibrated by the licensee annually. The RSO performed an annual audit of the radiation safety program.

The licensee possessed Cs-137 low dose brachytherapy sources that were not being used and were in storage. Sources were being inventoried and leak tested at appropriate frequencies.

The inspector reviewed dosimetry data and noted the maximum exposures were 289 mrem whole body (WB) and 4880 mrem extremity for 2011 through August 4; and 369 mrem WB and 5840 mrem extremity for 2010.

No violations were identified.