

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE/LOCATION INSPECTED:

Battle Creek Health System
300 North Avenue
Battle Creek, Michigan 49016

REPORT NUMBER(S) 2012001

2. NRC/REGIONAL OFFICE

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

3. DOCKET NUMBER(S)

030-13899

4. LICENSE NUMBER(S)

21-01354-04

5. DATE(S) OF INSPECTION

November 8, 2012

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:

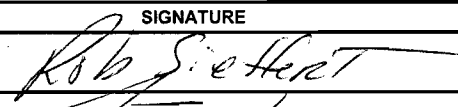
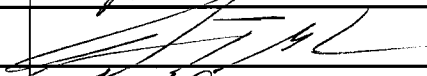
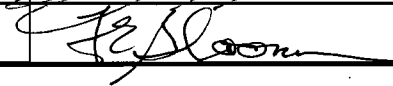
- 1. Based on the inspection findings, no violations were identified.
- 2. Previous violation(s) closed.
- 3. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is 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			11/8/12
NRC INSPECTOR	Aaron T. McCraw		11/8/12
BRANCH CHIEF	Tamara E. Bloomer		11/13/12

Docket File Information
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6. INSPECTION PROCEDURES USED IP 87131, 87132	7. INSPECTION FOCUS AREAS 03.01-03.09, 03.01-03.08
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SUPPLEMENTAL INSPECTION INFORMATION

1. PROGRAM CODE(S) 02230	2. PRIORITY 2	3. LICENSEE CONTACT Robert Sieffert, RSO	4. TELEPHONE NUMBER (269) 966-8146
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Main Office Inspection Next Inspection Date: 11/08/2014

Field Office Inspection

Temporary Job Site Inspection

PROGRAM SCOPE

The was a routine inspection of a 350-bed hospital, with associated cancer center, in Battle Creek, Michigan. The licensee was authorized for medical uses of radioactive materials under 35.100, 35.200, 35.300, 35.400, and 35.600 (for a high dose-rate remote afterloader brachytherapy device (HDR)). The nuclear medicine department saw up to 16 patients per day, mostly for bone and cardiac studies using technetium-99m. The department also performed diagnostic studies using iodine-123 (up to two per day) and iodine-131 (1-2 patients per week). Therapeutic administrations of iodine-131 were handled by the radiation oncology department. The nuclear medicine department was staffed by four full-time technologists and two students. The department used mostly unit doses, but received some bulk technetium-99m for add-on or after-hours studies. The department operated Monday through Friday during standard business hours and was on call for evenings and weekends. The radiation oncology department performed the occasional therapeutic administration of unsealed radioactive materials (iodine-131, samarium-153, and yttrium-90), 1-2 permanent implant brachytherapy procedures per year using iodine-125 seeds, and on average 18 fractionated HDR treatments per year. Most HDR treatments were partial breast irradiations using the Mammosite applicator, with the occasional vaginal cylinder and ring and tandem treatments.

PERFORMANCE OBSERVATIONS

The inspector observed one patient injection, including dose preparation and disposal, in the nuclear medicine department. Licensee personnel described package receipt, area surveys, and spill cleanup procedures. The inspector reviewed all written directives for diagnostic administrations of iodine-131 in the nuclear medicine department, as well as all written directives for therapeutic administrations of unsealed materials in the radiation oncology department. The inspector reviewed all written directives and treatment plans for all prostate implants and did not identify any potential medical events. The inspector observed the morning and afternoon fractions of a partial breast irradiation using the HDR unit and reviewed a selected sample of historical cases. All HDR administrations reviewed were in accordance with the written directives and treatment plans

No violations were identified during this inspection.