

Docket File Information
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
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3. DOCKET NUMBER(S) 030-13899	4. LICENSE NUMBER(S) 21-01354-04	5. DATE(S) OF INSPECTION November 8, 2012
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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.