NRC FORM 591M PART 1 (10-2003) 10 CFR 2.201

U.S. NUCLEAR REGULATORY COMMISSION

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE/LOCATION INSPECTED:	2. NRC/REGIONAL OFFICE
Ball Memorial Hospital **2401 W. University Ave.** **Muncie, IN 47303** REPORT **2006/001**	**Nuclear Regulatory Commission** **Region III** **2443 Warrenville Road, Suite 210** **Lisle, Illinois 60532**

3. DOCKET NUMBER(S)	4. LICENSEE NUMBER(S)	5. DATE(S) OF INSPECTION
030-01586	**13-00951-03**	**03/23/2006**

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) was/were discussed involving the following requirement(s) and Corrective Action(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. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.

(Violations and Corrective Actions)

Licensee's Statement of Corrective Actions for Item 4, above.

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	**Tony Go**	Tony Go	**03/23 / 2006**

NRC FORM 591M PART 3
(10-2003) 10 CFR 2.201

U.S. NUCLEAR REGULATORY COMMISSION

DOCKET FILE INFORMATION

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE Ball Memorial Hospital REPORT 2006/001		2. NRC/REGIONAL OFFICE **Region III**
3. DOCKET NUMBER(S) **030-01586**	4. LICENSE NUMBER(S) **13-00951-03**	5. DATE(S) OF INSPECTION **03/ 24 /06**
6. INSPECTION **87131, 87132**	7. INSPECTION FOCUS AREAS **03.01 - 03.07**	

SUPPLEMENTAL INSPECTION INFORMATION

1. PROGRAM	2. PRIORITY	3. LICENSEE CONTACT	4. TELEPHONE NUMBER
2240	2	**Alvi E. Voster, MS**	765-747-3148

[X] Main Office Inspection — Next Inspection Date: 03/2008

[ ] Field

[ ] Temporary

PROGRAM SCOPE

The licensee is a large hospital with a general nuclear medicine (NM), a separate cardiac NM, and oncology departments. This main facility is located in downtown Muncie, Indiana. The licensee also operates a clinic within an outpatient facility in Marion, Indiana. The Marion facility is currently operating only twice a week. At the main facility, the licensee staff at the NM department performed approximately 300 diagnostic procedures per month. The NM department performed 350 diagnostic studies, 100 hyperthyroid therapies per year using I-131 capsules with doses greater than 5 mCi, and approximately 20 ablation therapies per year with capsules containing between 100 and 200 mCi of I-131. The licensee ordered doses from a radiopharmacy in Indianapolis, and produced bulk doses from the licensee's Mo-99/Tc-99m generator stored in the hot lab facility. The licensee employed five technologists for the NM department, and two technologists at the clinic in Marion. According to the RSO, the two departments were independently operated; however, both were under a single oversight from the licensee's Radiation Safety Committee and the appointed RSO.

At the main facility, the oncology department performed approximately 40 permanent prostate implants with I-125 seeds. The licensee's oncology staff had not performed low dose LDR brachytherapies using Cs-137 tubes in the past years. At the facility, the licensee's oncology staff also operated a Nucletron HDR unit. At the department, the staff performed approximately 24 HDR cases of multiple fractions in past year. The licensee did discontinue the use of the Guidant Galileo IVB device, and the device was returned to the manufacturer. The licensee also retained a consultant physicist to perform quarterly audits for all the radiation safety programs.

Performance Observations

During the inspection, the licensee's technologists demonstrated the following activities to the inspector: (1) a daily radiation survey; (2) a weekly removable contamination survey; (3) a package receipt and a return survey; and (4) a daily dose calibrator constancy check. The inspector observed the administrations unit doses at the NM department containing the licensed materials. The inspector also observed technologists using both whole body and extremity dosimeters during administration and during handling of unit doses. In addition, NM technologists were observed using syringe shields, dosimeters, lab coats and gloves while administering radioactive materials. No violations of NRC requirements were identified during the inspection. During the inspection, the Nucletron Microselectron HDR V2 unit was stored at the licensee's secured LINAC room. The HDR was properly maintained by the manufacturer during the quarterly preventive maintenance. The records indicated that the licensee's staff conducted multiple fractions for both lung and gynecological therapies with the HDR unit. The HDR unit maintenance record was also reviewed during the inspection, and no safety problems were identified during the inspection.