NRC FORM 591M PART 1
(06-2010)
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, Inc. 2401 W. University Avenue Muncie, Indiana 47303 REPORT NUMBER(S): 2011-001	U.S. 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	January 25 , 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, NUREG-1600, 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. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11

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	Geoffrey M. Warren		1/25/11
Branch Chief	Tamara E. Bloomer		2/7/11

NRC FORM 591 M PART 3
(06-2010)
10 CFR 2.201

U.S. NUCLEAR REGULATORY COMMISSION

Docket File Information

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1. LICENSEE	2. NRC/REGIONAL OFFICE
Ball Memorial Hospital **Muncie, Indiana** REPORT NUMBER(S) 2011-001	U.S. 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	January 25, 2011

6. INSPECTION PROCEDURES	7. INSPECTION FOCUS AREAS
87131, 87132	03.01 – 03.08; 03.01 – 03.08

SUPPLEMENTAL INSPECTION INFORMATION

1.PROGRAM	2. PRIORITY	3. LICENSEE CONTACT	4. TELEPHONE NUMBER
02230	2	Alvis E. Foster, Ph.D., RSO	765-747-4440

☒ Main Office Inspection — Next Inspection Date: January 2013

☐ Field Office Inspection _____

☐ Temporary Job Site Inspection _____

PROGRAM SCOPE

The licensee was a 300-bed hospital located in Muncie, Indiana, with authorization to use byproduct materials in Sections 35.100, 35.200, 35.300, and 35.400, as well as iridium-192 in a high dose rate remote afterloader (HDR). Licensed activities were conducted only at the facility identified on the license.

Nuclear medicine procedures were performed in two areas – nuclear medicine and cardiology. The nuclear medicine area was staffed with three full-time and two fill-in nuclear medicine technologists. The staff typically administered 200 diagnostic doses and 2-3 iodine-131 therapy doses monthly, with iodine-131 in capsule form. The diagnostic procedures were predominately technetium-99m hepatobiliary, bone, and other imaging, received as unit doses or prepared from bulk technetium-99m received from a licensed nuclear pharmacy.

Cardiology staff comprised three full time and one part time technologists, who typically performed 300 cardiac stress and rest procedures monthly. Doses were received as unit doses from the radiopharmacy.

The radiation therapy department was staffed with two physicist/dosimetrists. The radiation therapy staff performed approximately fifteen HDR fractions monthly, around fifteen permanent prostate implant procedures monthly using iodine-125 seeds, and occasional temporary implants using cesium-137 seeds. While the licensee possesses a strontium-90 eye applicator, it has not been used since before the previous inspection.

Performance Observations

The inspector observed two diagnostic administrations of licensed material, including dose preparation and disposal, as well as survey meter QC. Licensee staff demonstrated package receipt and return surveys, dose calibrator constancy, daily and weekly contamination surveys, and daily HDR system checks, and described a variety of diagnostic and therapeutic nuclear medicine procedures, and procedures for planning and performing HDR and prostate implants. The inspector noted no concerns with these activities. The inspector reviewed written directives for radiopharmaceutical therapies, HDR, and prostate implants, and identified no concerns. Interviews with licensee personnel indicated adequate knowledge of radiation safety concepts and procedures. The inspector performed independent and confirmatory radiation measurements which indicated results consistent with licensee survey records and postings.