

**SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION**

<b>1. LICENSEE/LOCATION INSPECTED:</b> Deaconess Hospital 600 Mary Street Evansville, Indiana  <b>REPORT NUMBER(S)</b> 2010-001		<b>2. NRC/REGIONAL OFFICE</b>  <b>Region III</b> <b>U.S. Nuclear Regulatory Commission</b> <b>2443 Warrenville Road, Suite 210</b> <b>Lisle, Illinois 60532-4351</b>	
<b>3. DOCKET NUMBER(S)</b> 030-01580	<b>4. LICENSEE NUMBER(S)</b> 13-00142-02	<b>5. DATE(S) OF INSPECTION</b> May 12-14, 2010	

**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) 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	Geoffrey M. Warren		5/14/10

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3. DOCKET NUMBER(S) 030-01580	4. LICENSE NUMBER(S) 13-00142-02	5. DATE(S) OF INSPECTION May 12-14, 2010	
6. INSPECTION PROCEDURES USED 87131, 87132		7. INSPECTION FOCUS AREAS 03.01 – 03.08; 03.01 – 03.08	
SUPPLEMENTAL INSPECTION INFORMATION			
1. PROGRAM CODE(S) 02230	2. PRIORITY 2	3. LICENSEE CONTACT John P. Sutkowski, M.D., RSO	4. TELEPHONE NUMBER 812-858-0080

<input checked="" type="checkbox"/> Main Office Inspection	Next Inspection Date: <u>May 2012</u>
<input checked="" type="checkbox"/> Field Office	<u>Chancellor Center for Oncology, 4055 Gateway Blvd., Newburgh; Midwest Radiologic Imaging,</u>
<input type="checkbox"/> Temporary Job Site Inspection	<u>4087 Gateway Blvd., Newburgh; 4015 Gateway Blvd., Newburgh</u>

## PROGRAM SCOPE

The licensee was a medical licensee with facilities in Evansville and Newburgh, Indiana. Licensed activities were conducted only at facilities authorized on the license.

Deaconess Hospital (600 Mary St., Evansville, IN) was a 250-bed medical facility, with authorization to use byproduct materials in Sections 35.100, 35.200 and 35.300, as well as a blood irradiator. The nuclear medicine department was staffed with four to five full-time nuclear medicine technologists; most of the technologists routinely rotated through other facilities on the license. The licensee's nuclear medicine staff typically administered 400 diagnostic doses monthly and ten iodine-131 (I-131) therapy doses annually, with the I-131 in capsule form. The diagnostic procedures were predominately technetium-99m cardiac and bone imaging. The department received daily unit doses and bulk technetium-99m from a licensed nuclear pharmacy.

The Chancellor Center was authorized to operate a High Dose Rate (HDR) remote afterloader system for radiation therapy. The department was staffed with three primary physician authorized users, one physicist/dosimetrist, and one therapist who was involved in HDR treatments. The radiation therapy staff performed approximately 70 to 80 HDR fractions annually.

Midwest Radiologic Imaging (MRI) was an outpatient nuclear medicine clinic, authorized to use byproduct materials in Sections 35.100, 35.200, and 35.300. One full-time nuclear medicine technologist and one part-time technologist performed approximately 80 diagnostic procedures monthly, primarily bone, renal, and other procedures with the doses received as unit doses from a licensed radiopharmacy. In addition, MRI staff performed approximately two to three I-131 hyperthyroid treatments and whole-body scans monthly, with the I-131 in capsule form. MRI staff performed cardiac stress tests at 4015 Gateway Blvd.

## Performance Observations

The inspector observed three diagnostic administrations of licensed material including dose preparation and disposal, wipe counter and survey meter QC, package receipt surveys and wipe tests, and dose calibrator constancy checks. Licensee personnel demonstrated daily HDR checks, irradiator operation, and diagnostic and therapeutic administrations, and described spill procedures and HDR treatment planning and administration. The inspector identified no concerns with these activities. The inspector reviewed written directives for I-131 radiopharmaceutical therapies and HDR treatments 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.