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
St. Mary's Medical Center Nuclear Medicine 3700 Washington Avenue Evansville, IN 47750 **REPORT NUMBER(S)** 10-01	**Region III** **U.S. Nuclear Regulatory Commission** **2443 Warrenville Road, Suite 210** **Lisle, Illinois 60532-4351**

3. DOCKET NUMBER(S)	4. LICENSEE NUMBER(S)	5. DATE(S) OF INSPECTION
030-20812	13-03226-04	September 1, 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.

One Non-Cited Violation(s) was/were discussed involving the following requirement(s) and Corrective Action(s):

The licensee failed to dispose of licensed material by decay in storage or transfer to an authorized recipient in accordance with 10 CFR 20.2001. Specifically, on July 2, 2007, the licensee placed microcurie quantities of technetium-99m into the normal trash, which alarmed the local landfill radiation detectors. As corrective action, licensee personnel retrieved the radioactive material from the landfill, placed the material into its decay in storage waste, revised its procedures to ensure that all tubing associated with cardiac stress tests be placed in the radioactive waste container and instructed staff on the revised procedure.

☐ 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	Ken Lambert	Ken Lambert	9/23/10

NRC FORM 591M PART 1 (10-2003)

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

Docket File Information

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6. INSPECTION PROCEDURES USED	7. INSPECTION FOCUS AREAS
87131	03.01 – 03.07

SUPPLEMENTAL INSPECTION INFORMATION

1. PROGRAM CODE(S)	2. PRIORITY	3. LICENSEE CONTACT	4. TELEPHONE NUMBER
2120	3	Saiyid Shah, RSO	812-205-6610

[X] Main Office Inspection — Next Inspection Date: September 2013

[X] Field Office 711 St. Mary's Drive, Evansville, IN

[ ] Temporary Job Site Inspection

PROGRAM SCOPE

The licensee was a large medical facility located in Evansville, Indiana, which served the southwest Indiana areas and nearby areas of Kentucky and Illinois. The licensee was authorized for 35.100, 200 and 300 materials, prepackaged kits. The nuclear medicine department was staff with 5 full time technologists, 1 part time technologist and 1 on call technologist. The licensee's staff typically administered approximately 75 studies per week. The licensee received unit doses and 150 millicuries of bulk technetium-99m daily for after hour and weekend studies. The studies primarily used technetium-99m for cardiac, bone, gall bladder and other studied. In addition, the licensee performed studies using F-18, and indium-111. The licensee performed approximately 2 thyroid therapy treatments per week using iodine-131 in capsule form. The licensee performed nuclear medicine at its main hospital and an outpatient nuclear medicine facility located with the medical center, but separate from the hospital. All waste was held for decay or returned to the nuclear pharmacy.

The licensee also operated a cesium-137 blood irradiator at the blood bank. The licensee had discontinued HDR treatments.

Performance Observations

The inspector observed several diagnostic administrations of licensed material including dose preparation and disposal. Licensee staff discussed/demonstrated dose calibrator daily constancy checks, package receipt, daily and weekly contamination surveys and wipes, with no issues identified. Interviews of staff indicated an adequate knowledge of radiation safety procedures. The inspector reviewed dosimetry records and noted the following whole body (WB) and extremity exposures: 718 mrem WB and 3630 mrem extremity for 2008; 586 mrem WB and 5480 extremity for 2009; and 250 mrem and 3630 mrem extremity for 2010 to July 31.

The inspector reviewed radiation safety committee meeting minutes and noted that the licensee discussed and issue involving a load of waste sent to the local sanitary landfill that set of the radiation alarm at the landfill. The licensee was notified and sent a technologist to the landfill who surveyed the waste from the hospital and indented a bag with elevated activity. The bag was transported back to the hospital and identified three syringes and tubing from three cardiac studies performed the previous day that were stressed using Adenosine. The licensee took a swipe of the syringes and tubing and using a well counter identified 1.2 microcuries of activity. Based on the energy range of the activity, the licensee identified the material as technetium-99m. The syringes and tubing was placed in the licensee decay in storage radioactive waste. As corrective actions he licensee revised its procedures to ensure that all tubing associated with cardiac stress tests be placed in the radioactive waste container and instructed staff on the revised procedure. This failure to dispose of radioactive waste by decay in storage or by transfer to a licensed recipient is a violation of 10 CFR 20.2001 and will be treated as a non-cited violation since it was licensee identified and corrected.