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
North Kansas City Hospital 2800 Clay Edwards Drive North Kansas City, MO 64116 REPORT **2006-001 &-002**	**U.S. Nuclear Regulatory Commission** **Region III** **2443 Warrenville Road** **Suite 210** **Lisle, Illinois 60532-4351**

3. DOCKET NUMBER(S)	4. LICENSEE NUMBER(S)	5. DATE(S) OF INSPECTION
030-13966	24-18628-01	March 7 , 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, 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)

10 CFR 35.67(b)(2) requires sealed sources to be tested for leakage at 3 year intervals (as approved by the Commission).
Contrary to the above, the licensee did not test 8 cesium 3M model CDC-CA sources for leakage at 3 year intervals. Specifically the licensee last tested the 3M sources on 8/17/01, an interval greater than 3 years.
The licensee committed to leak test the sources ASAP.

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	HANAMEL RAOB		3-7-06
NRC INSPECTOR	**Deborah A. Piskura**		3/07/06

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

U.S. NUCLEAR REGULATORY COMMISSION

Docket File Information

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1. LICENSEE	2. NRC/REGIONAL OFFICE
North Kansas City Hospital REPORT **2006-001 & 2006-002**	**Region III** **2443 Warrenville Road, Suite 210** **Lisle, IL 60532**

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6. INSPECTION PROCEDURES USED	7. INSPECTION FOCUS AREAS
87130, 87131 and 87132	03.01, 03.02, 03.03, 03.04, 03.05, 03.06, 03.07, and 03.08

SUPPLEMENTAL INSPECTION INFORMATION

1. PROGRAM CODE(S)	2. PRIORITY	3. LICENSEE CONTACT	4. TELEPHONE NUMBER
02240	G 2	Kenneth W. Arnett, M.D., RSO	816.271.6000

[X] Main Office Inspection — Next Inspection Date: Feb. 2008

[X] Field — 2750 Clay Edwards Drive (Radiation Oncology) N.K.C., MO

[ ] Temporary Job Site

PROGRAM SCOPE

This licensee was a 400-bed hospital, authorized to use licensed material permitted by Sections 35.100, 35.200, 35.300, 35.400, and 35.1000 Sr-90 IVB devices. The nuclear medicine department was staffed with seven full-time technologists who performed approximately 500-600+ diagnostic nuclear medicine procedures per month. Nuclear medicine activities were performed in two separate areas within the main hospital (diagnostic studies within the radiology department, and cardiac studies in the cardiac department). In addition, the hospital was authorized to perform cardiac imaging at a separate cardiac clinic (this program was inactive at the time of this inspection). The licensee received unit doses from a licensed radiopharmacy. The hospital performed a full spectrum of nuclear diagnostic imaging studies. Typically, in a year the hospital administered 20 iodine-131 thyroid carcinoma therapies and 20-25 hyperthyroidism treatments. The hospital obtained its I-131 in capsule form only. The department administered 4-5 Sr-89 and Sm-153 dosages annually for treatment of metastatic bone disease. Occasionally the department administered Bextar and Zevalin treatments. The licensee retained the services of a consulting physicist to audit the radiation safety program on a quarterly basis.

The radiation therapy activities were performed by a contract medical physicist and one in-house dosimetrist. Brachytherapy activities included Pd-103 permanent implants and Cs-137/Ir-192 temporary gynecological implants (1-2 cases annually). Although the licensee was approved for 35.1000 material, the hospital transferred its IVB unit to the manufacturer for disposal.

This inspection consisted of interviews with licensee personnel, a review of selected records, tours of the nuclear medicine and radiation oncology departments, and independent measurements. The inspector observed licensee nuclear medicine personnel prepare, assay and administer several unit doses for various imaging procedures. The inspection included observations of dose calibrator QA checks, package receipts and surveys, and area surveys.

One violation of NRC requirements was identified concerning the licensee's failure to conduct sealed source leak tests on the Cs-137 brachytherapy sources at the approved 3-year intervals, as required by Section 35.67(b)(2). The last leak tests were performed on 8/17/2001 with the next tests due in August 2004. The licensee used its Cs-137 sources to treat three patients in late 2004 and 2005, however the hospital staff failed to recognize that the sources had not been tested prior to the administration of these implants. The licensee committed to perform the required leak tests on the brachytherapy sources ASAP and add a reminder to the department calender.