

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE/LOCATION INSPECTED:

Good Samaritan Hospital
520 South 7th Street
Vincennes, IN 47591

REPORT NUMBER(S) 15-001

2. NRC/REGIONAL OFFICE

Region III
U. S. Nuclear Regulatory Commission
2443 Warrenville Rd, Suite 210
Lisle, IL 60532

3. DOCKET NUMBER(S)

030-01600

4. LICENSE NUMBER(S)

13-01787-01

5. DATE(S) OF INSPECTION

December 17th 2015

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) 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 in accordance with NRC Enforcement Policy. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.
(Violations and Corrective Actions)

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	Zahid Sulaiman	<i>Zahid Sulaiman</i>	Dec 18, 2015
BRANCH CHIEF	Aaron T. McCraw	<i>ATM</i>	12/24/15

Docket File Information

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3. DOCKET NUMBER(S) 030-01600	4. LICENSE NUMBER(S) 13-01787-01	5. DATE(S) OF INSPECTION December 17-18, 2015
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6. INSPECTION PROCEDURES USED 87131 & 87132	7. INSPECTION FOCUS AREAS 03.01-03.07
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SUPPLEMENTAL INSPECTION INFORMATION

1. PROGRAM CODE(S) 02240	2. PRIORITY 2	3. LICENSEE CONTACT Yinghui Zhang, Ph.D, RSO	4. TELEPHONE NUMBER (812) 882-3351
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Main Office Inspection Next Inspection Date: 12/18/2017
 Field Office Inspection _____
 Temporary Job Site Inspection _____

PROGRAM SCOPE

This was a routine inspection of a community hospital, with 235 beds, authorized under NRC license to use byproduct materials for medical uses permitted by 10 CFR 35.100, 35.200, 35.300, 35.400, 35.500 and 35.600. The nuclear medicine department was staffed with four full-time nuclear medicine technologists (NMT) who performed approximately 300 diagnostic nuclear medicine procedures monthly. The licensee received unit and bulk doses from a licensed radiopharmacy. Doses were primarily technetium-99m for cardiac, bone scan, lung, Hida, renal, gastric emptying and other studies. No iodine-131 therapy procedures has been performed since last inspection. The cancer center was staffed with two full-time oncologists, one full-time dosimetrist, and one full-time authorized medical physicist (AMP). The licensee conducts approximately 40 high dose rate brachytherapy (HDR) treatments per year. The majority of treatments conducted were to treat breast, gynecological, prostate and other cancers. The licensee conducted one manual brachytherapy using Pd-103 since last inspection. The licensee treated two patients using strontium-90 eye applicator since last inspection. The licensee started Xofigo treatment using radium-223 and treated three patients since November 2015.

Performance Observations:

The inspector: (1) observed administration of Xe-133 to a patient for lung scan; (2) observed an NMT conduct a physical inventory of sealed sources and all sources were accounted for; (3) had the NMT demonstrate the dose calibrator constancy check, the radioactive material package receiving and check-in procedures; (4) had the NMT demonstrate the end of the day daily and weekly area surveys; (5) had the NMT demonstrate proper handling of radioactive waste for decay-in-storage; (5) reviewed three radium-223 procedures written directives (WD) with no issues noted. The inspector had the AMP demonstrate the HDR unit's: (1) security of licensed material; (2) full calibration measurement; (3) daily spot checks; (4) emergency equipment and procedures; (5) safety procedures and instructions; (6) door interlock system; (7) radiation monitoring equipment; and (8) ON-OFF switch to prevent dual operation in the treatment room. The inspector reviewed 5 gynecological, 5 breast, 3 prostate and 3 lung cancer treatment written directives and treatment plans with no issues noted. The inspector reviewed one manual brachytherapy treatment using palladium-103 written directive and treatment plan with no issues noted.

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(Continued)

The inspector reviewed annual radiation safety program audits, radiation safety committee minutes; leak tests, dose calibrator linearity, accuracy and geometry tests. The inspector reviewed dosimetry records for 2013, 2014, & 2015, indicating the maximum annual doses to be 326 mrem to whole body and 2530 mrem to extremity. The inspector performed independent radiation measurements of the hot lab, imaging room, stress test room and decay in storage areas which were consistent with licensee surveys result and within regulatory limits.

No violation of NRC regulatory requirements were identified during this inspection.