U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 30-19652/86-01 License: 49-21004-01

Docket: 30-19652

Licensee: Riverton Memorial Hospital
2100 W. Sunset Drive
P.O. Box 1280
Riverton, Wyoming 82501

Inspection at: Riverton, Wyoming

Inspection Conducted: September 30 through October 1, 1986

Inspector: Larry Rickelson 10-17-86
L. T. Rickelson P.E., Radiation Specialist Date

Approved: R L Cain 10-22-86
R. J. Everett, Chief, Nuclear Materials Safety Section Date

Inspection Summary

Inspection Conducted September 30 through October 1, 1986
(Report: 30-19652/86-01)

Areas Inspected: As the result of an allegation, a special unannounced inspection was conducted. In addition to addressing the allegation, a complete review of the program was performed including records reviews, interviews with personnel and observations of operations.

Results: The allegation concerning unauthorized users was substantiated by the findings and within the areas inspected, nine apparent violations were identified as follows:

1. Use of licensed material by unauthorized personnel. (Section 4)

2. Use of licensed material by locum tenens physicians who did not fulfill license requirements. (Section 4)

3. Failure of individuals to use personnel monitoring devices. (Section 5)

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4. Failure to conduct quarterly linearity tests on dose calibrators. (Section 5)

5. Failure of the Radiation Safety Committee to meet quarterly. A repeat item. (Section 5)

6. Failure to properly determine molybdenum-99 concentration in technetium-99m elutions. (Section 6)

7. Failure to leak test sealed sources of radiation at intervals less than 6 months. (Section 6)

8. Failure to inventory sealed sources of radiation on a quarterly basis. (Section 6)

9. Failure to amend the license to indicate the current name of the facility. (Section 3)

DETAILS

1. Persons Contacted

Yvonne Hodge, Director of Nurses
John Russell, Chief Technician
Bruce Birchell, Hospital Administrator (by telephone)

2. Reason for Special Inspection

The Region IV Allegations Coordinator received a letter from an individual alleging that the licensee was employing unauthorized physicians to use radioactive materials. (4-86-A-089)

3. License Condition 1

According to a representative of the licensee, the name of the hospital is actually HCA Riverton Hospital. The name change was made within the last year. This resulted in some initial confusion because of the way the alleger identified the facility as opposed to the way the license lists the name. This was identified by the NRC inspector as an apparent violation of License Condition 1, which lists the name of the facility as Riverton Memorial Hospital. Hospital Corporation of America owns the facility and has for a number of years, so there has been no recent change in ownership.

4. License Conditions 11 and 12

The NRC inspector reviewed the records of a documented study using licensed material, which was performed on June 10, 1985, by Doctor A. This physician was not listed on the license as an authorized user nor could verification be obtained that the individual appeared on any NRC license. The licensee's representative gave the name of the facility at which the physician was on staff. A check of that facility's license by the inspector upon his return to Region IV revealed that the individual was not listed as an authorized user. This was identified by the NRC inspector as an apparent violation of License Condition 11, which lists individuals authorized to use licensed material.

Additionally, the NRC inspector reviewed records documenting studies performed by Doctor B on September 4-5 and 8-9, 1986. Doctor B was employed by still another facility and also was not listed on this license or the license of the facility at which the inspector was told the physician was employed. These were identified by the NRC inspector as additional examples of apparent violations of License Condition 11.

The NRC inspector noted numerous examples in June 1985 and August through September 1986 in which physicians from a military hospital performed studies in the hospital. These studies were generally conducted when the hospital had no authorized user employed or the authorized users were on

leave from the facility. License Condition 12 lists the requirements which must be met before a visiting physician can use licensed material as an authorized user. One of those requirements is that the physician be specifically named as a user on an NRC license. Physicians working at the military hospital are working under a broad license and therefore are not listed specifically. The NRC inspector identified this as an apparent violation of License Condition 12.

The above findings substantiate the allegation that unauthorized individuals used licensed materials.

5. License Condition 15

License Condition 15 requires that the licensee conduct its program in accordance with the license application and submitted procedures.

Item 24 of the application lists the type of personnel monitoring devices to be used to monitor whole body and extremity exposure. When questioned by the NRC inspector, the nuclear medicine technician stated that he often did not wear the whole body badge, although he did wear the ring badge. The NRC inspector identified this as an apparent violation of License Condition 15.

The operating procedures require that the dose calibrator be tested for linearity on a quarterly basis. According to records and statements of the licensee's representatives, the latest linearity test was on October 14, 1985. The NRC inspector identified this as an apparent violation of License Condition 15.

The operating procedures require that the Radiation Safety Committee hold quarterly meetings. Records indicated that this interval had not been maintained. The representative of the licensee confirmed that meetings had not been held during the fourth quarter of 1985, the second quarter of 1986, or the third quarter of 1986. The NRC inspector identified this as an apparent violation of License Condition 15. This item was cited on the previous inspection conducted September 12, 1983.

6. 10 CFR 35.14

The nuclear medicine technician demonstrated his technique for determining the concentration of molybdenum-99 in each elution of technetium-99m. The NRC inspector noted that the technician only performed an assay for technetium-99m and then performed a mathematical calculation to determine the concentration of the molybdenum. The inspector questioned the technician about this procedure and the fact that an additional assay was not conducted using a shield to allow the measurement of the molybdenum. The technician said that he knew nothing of such a shield and could not produce a written copy of the procedure which he was to use. He had been performing his current duties since September of 1985. The technician's former supervisor was contacted and the shield used for this procedure was located. The NRC inspector identified this as an apparent violation of 10

CFR 35.14(b)(4)(ii) which requires the determination of the molybdenum-99 content in each elution of technetium-99m by established procedure.

The licensee possessed sealed sources for the purpose of calibration and reference under the provisions of 10 CFR 35.14(d). The licensee's representative confirmed that these sources had not been tested for leakage since October 28, 1985, exceeding the six month limit. The NRC inspector identified this as a violation of 10 CFR 35.14 (e)(1)(i).

The licensee's representative also confirmed that the records were correct in showing that the last inventory of sealed sources was performed on October 4, 1985. Because the inventories were not performed on a quarterly interval, the NRC inspector identified it as an apparent violation of 10 CFR 35.14(f)(2).

7. Exit Meeting

The administrator was not available during the inspection, but an exit meeting was held with his designee, the Director of Nurses, and the chief technician. The findings of the NRC inspector were discussed and were acknowledged by the representatives of the licensee. The chief technician stated that operations in the nuclear medicine department would cease until authorized users could be approved by the NRC. The administrator was briefed by telephone on Monday of the week following the inspection.