U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 30-1807/81-01

Docket No. 30-1807

License No. 20-00275-08 Priority IV Category G

Licensee: Boston City Hospital
Departments of Radiology & Radiation Physics
818 Harrison Avenue
Boston, Massachusetts 02118

Facility Name: Boston City Hospital

Inspection at: Boston, Massachusetts

Inspection conducted: March 26, 1981

Inspectors: _____ 7/13/81
M. Campbell, Radiation Specialist — date signed

_____ date signed

_____ date signed

Approved by: _____ 7/14/81
John D. Kinneman, Chief, Materials — date signed
Radiological Protection Section

Inspection Summary:

Inspection on March 26, 1981 (Report No. 30-1807/81-01)
Areas Inspected: Special, announced inspection of circumstances surrounding misadministration of 8.8 mCi of Iodine-131 including notification and description of event. This inspection involved two inspector-hours onsite time by one regional based inspector.
Results: Of the two areas inspected, no items of noncompliance were identified.

Region I Form 12
(Rev. April 77)

## DETAILS

1. Persons Contacted

*Dr. Jacob Spira, Chairman, Radiation Safety Committee
*Mr. David Cail, Radiation Safety Officer
*Dr. Victor Lee, Chief, Department of Nuclear Medicine
Dr. Nicolas Spencer, Department of Nuclear Medicine
Mr. John Getchell, Chief Technician, Department of Nuclear Medicine

* denotes those present during the exit interview.

2. Notification

On March 25, 1981, the Region I office was notified by telephone that a misadministration had occurred at the licensee's facility, as a result of a mistake in patient identification.

3. Description of Event

Both Patient A and Patient B had had thyroid scans in the nuclear medicine department during the week of March 16, 1981. Neither patient speaks English and both were escorted by their sons who acted as interpreters. Patient B was scheduled to receive a dose of I-131 to treat her hyperthyroidism on March 24, 1981.

On March 23, 1981, Patient A came into the Nuclear Medicine area, accompanied by her son. The staff of Boston City Hospital is accustomed to having patients show up at times other than their scheduled hours.

The chief technician recognized her as a thyroid patient. He took the requisition for the therapeutic dose of I-131, along with the consent form, spoke to Patient A using Patient B's name, and escorted the patient and her son into the area used for iodine administration. He then picked up the iodine dose and called the resident. The technician introduced the resident to the patient, using Patient B's name. The resident discussed the consent form with Patient A through her son, and they both signed it. The resident then administered the dose of 8.8 mCi of I-131.

On March 24, 1981, Patient B arrived at her appointed time to receive the therapeutic dose of I-131. At this time the chief technician realized that a mistake had been made and that the dose had been administered to the wrong patient on the previous day.

The chief technician then notified the resident and the head of the Nuclear Medicine Department about the misadministration.

The department head (Dr. Lee) contacted the patient by telephone immediately but was unable to communicate the situation to her because she spoke no English. When her son returned home from work, he was contacted and the situation was explained to both of them. An appointment was made for Patient A for the next day to evaluate the effects of the dose which she had received.

A thyroid scan was performed on the next day, March 25. It indicated that her thyroid had an uptake of 11% of the 8.8 mCi of I-131 which had been administered. Dr. Robert Levine, who is the Chief of Endocrinology and Associate Director of Medicine, in addition to being a member of the Radiation Safety Committee of Boston City Hospital, was consulted. According to his experience and the medical literature, patients with normal thyroids are usually resistant to radioactive iodine treatment. The hospital plans to monitor the patient for hypothyroid effects on a regular basis.

On March 25, the Radiation Safety Officer of the hospital and the NRC were notified of the misadministration.

During the March 26, 1981 inspection, Dr. Lee indicated that he realized that the notification to the RSO and the NRC should have been made sooner but that at the time his primary concern was to notify the patient in order to expedite the medical evaluation of the consequences of the misadministration.

4. Exit Interview

The inspector met with the individuals denoted in paragraph 1 and summarized the scope and results of the inspection. The inspector stated that the results of the inspection would be reviewed by NRC management to determine the appropriate enforcement action. The licensee representatives stated that they intended to review the procedures for identification of outpatients to determine what actions could be taken to avoid future misadministrations.