Baystate
Medical Center
A Member of Baystate Health Systems
Springfield, Massachusetts 01199
413-784-0000

July 10, 1996

Mohamed M. Shanbaky. Ph.D., Chief
US NRC
Region I
475 Allendale Road
King of Prussia, PA 19406-1415

SUBJECT: Routine Inspection Nos. 030-09946/96-001 and 030-00230/96-001

DOCKET No . 030-09946/030-00230
USNRC LICENSES: 20-01412-05/20-01412-03

Dear Dr. Shanbaky:

This is in response to your letter dated June 14, 1996 or June 17, 1996.

ITEM A: The calibration certificates from K/S ADCL are enclosed for the survey meters in use. At present time we have initiated the use of new Packard 3" Na I counting system with special background shield for analysis of beta source wipe test samples. The enclosed documents give "MDA" and "Efficiency" of standards used for gamma-ray sources. A similar analysis is under way for Beta sources (e.g. Sr-90). I expect to get the protocol for Beta counting ready before the next semi-annual leak test due (Oct, 11, 1996) on our Sr-90 sources. This delay is due to special prep time taken by Testor Lab (recommended by Packard Instruments) to obtain Beta calibration standards such as Sr-90.

I intend to send you a similar document for Beta source leak testing procedures on our new Packard System as soon as we complete the work (before October, 1996).

ITEM B: The copies of two radiation survey forms approved by your licensing division are enclosed. One is for Temporary Implant (sealed sources) and other is for Permanent Implant (e.g. I-131). The separate forms were approved in 1980 for our license to fulfill the intent of regulations to ensure safety of the public after the patient is discharged from hospital. In brachytherapy or temporary implant I sought approval to ensure that no sources were left in the patient or in the room. This assurance was obtained conducting the radiation monitoring close to the patient after removing the sealed sources The line item boxes 2 and 3 of Section III (Blue Form) ensure this.

Measuring radiation levels at 3 ft. does not make any sense. Any level above background (i.e. > 0.05 mR/hr) should be a cause for concern of residual activity or sealed source in patient.

The second form used for permanent implant (e.g. I-131) does measure mR/hr at 3 feet before discharge to ensure the compliance limits are met. Data entered in Section III of Green Form.

If the variances granted by your licensing division to use two separate forms are unacceptable to you now, then I will modify our Blue Form to include mR/hr which should be less than 0.05 mR/hr when the sealed sources are removed from the patient.

Thank you.

Sincerely,

7-11-96

Suresh M. Brahmavar, Ph.D.
Chief/Director Medical Physics/Radiation Safety
Corporate Radiation Safety Officer

John F. McCarron
Vice-President
Medical Support Services

encl.

SMB/me

BAYSTATE MEDICAL CENTER

NURSING INSTRUCTIONS & RADIATION SURVEYS: TEMPORARY IMPLANTS

☐ SPRINGFIELD HOSPITAL UNIT ☐ WESSON WOMEN'S UNIT ☐ WESSON MEMORIAL UNIT

Patient's Name: _____ Physician's Name: _____ Room #: _____

Isotope: _____ Total Activity: _____ Total Number of Sources: _____

Brachytherapy Started: Date: _____ Time: _____

Sources to be Removed: Date: _____ Time: _____

I. NURSING INSTRUCTIONS: Comply with all checked (/) items.

- ☐ Patient must have private room.
- ☐ Patient may not leave room.
- ☐ Visitors, employees and other personnel under 18 years are not permitted.
- ☐ Pregnant visitors, employees and other personnel are not permitted.
- ☐ Visiting time permitted: _____ minutes.
- ☐ Visitors must remain: _____ feet from patient.
- ☐ Place laundry in linen bag and save.
- ☐ Radiation monitors must be worn.
- ☐ Housekeeping may not enter the room.
- ☐ A dismissal radiation monitoring must be done before patient is discharged.
- ☐ All items must remain in the room until OK'd by Radiation Safety Officer.
- ☐ Do not release the room to Admitting until OK'd by Radiation Safety Officer.
- ☐ Do not exceed the occupancy times at each location given below.
- ☐ Phlebotomy work must be deferred until the end of therapy.
- ☐ Other instructions: _____

NOTE: 1. Follow all the routine radiation precautions in nursing care of radioactive patient.
2. When radiation sources are removed from the patient, **physician or his assistant must complete the details of Item III below.**
3. After patient is discharged from the unit, please return the completed form to:

SURESH M. BRAHMAVAR, PH.D.
Director, Medical Physics & Radiation Safety Service

II. INITIAL RADIATION SURVEY:

Date: _____ Time: _____ Survey By: _____

USE and COMPLETE THESE TAGS: ☐ Door ☐ Chart ☐ Bed ☐ Other

Survey Meter: _____ Date of Calibration: _____

LOCATION	BEDSIDE	3 FEET	6 FEET	ENTRANCE DOOR	ADJACENT ROOM #	
					Patient Site	Other
mR/hr						
OCCUPANCY TIME (100 mR per wk.)						

III. SOURCE REMOVAL & RADIATION MONITORING:

Total Activity: _____ Number of Sources: _____ Isotope: _____

Date of Removal: _____ Time of Removal: _____

- ☐ Radiation sources were returned to the storage safe in "hot lab."
- ☐ Radiation monitoring indicated that no sealed sources remained in the patient.
- ☐ **Radiation monitoring of room and patient items indicated no significant radiation levels present in the room.** mR/hr
- ☐ Discharge instructions were given to patient and nursing staff.

Radiation sources removal and monitoring by: _____

IV. RADIATION SAFETY OFFICE:

Radiation Safety Officer Inspection: _____ Date: _____

Items of Non-Compliance: ☐ I ☐ II ☐ III ☐ None

Corrective Action: _____

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

JUN 14 1996

Docket Nos: 030-09946
030-00230

License Nos: 20-01412-05
20-01412-03

John F. McCarron
Vice President, Medical Support Services
Baystate Health Systems, Inc.
759 Chestnut Street
Springfield, MA 01199

SUBJECT: ROUTINE INSPECTION NOS. 030-09946/96-001 AND 030-00230/96-001

Dear Mr. McCarron:

This refers to your letter dated April 11, 1996, submitted in response to our letter dated March 13, 1996. Our letter enclosed a Notice of Violation which described two violations of regulatory requirements which were identified during the subject routine inspections conducted between January 30 and February 2, 1996. We have reviewed your April 11, 1996 response to these violations.

In your letter you requested that we reconsider our decision on the two cited violations in light of the supporting documentation that you enclosed with your letter. After careful examination of the material that you provided, additional clarification is requested for further reconsideration of the two cited violations.

With regard to Item A of the Notice of Violation, please provide a copy of the calibration certificate and the efficiency factors for the instruments that you have used (1994-1995), and are currently using, to determine the amounts of radioactive materials leakage from your sealed sources.

With regard to Item B of the Notice of Violation, your April 11, 1996 response states that your survey form meets all requirements and encloses a copy of a typical survey form. NRC notes that your record of post implant surveys meets the requirements of 10 CFR 35.406(c) and 35.415(a)(4). However, your patient release survey record does not meet the requirements of 10 CFR 35.404(b) in that the record does not include the dose rate from the patient expressed as millirem per hour and measured at one meter (3 feet) from the patient. Please confirm that your record of patient survey performed prior to the release of the patient will be expressed as millirem per hour measured at one meter from the patient.

Your April 11, 1996 letter also requested the results of the analysis of the strontium-90 sealed source leak test samples that were performed in the NRC Region I laboratory. Please be advised that the samples indicated no leakage of strontium-90 f[illegible] either of the two sealed sources.

Please submit to this office within thirty (30) days of receipt of this letter a written statement containing the requested information.

Thank you for your cooperation. We apologize for the delay in responding to your letter.

Sincerely,

M. S. Shanbaky

Mohamed M. Shanbaky, Ph.D., Chief
Nuclear Materials Safety Branch 1
Division of Nuclear Materials Safety

Docket Nos. 030-09946
030-00230
License Nos. 20-01412-05
20-01412-03

cc:
Suresh M. Brahmavar, Ph.D., Radiation Safety Officer
Commonwealth of Massachusetts