

030-00492

September 16, 1988

John E. Glenn, Ph.D., Chief  
Nuclear Materials Safety Section B  
Division of Radiation Safety & Standards  
United States Nuclear Regulatory Commission  
Region I  
475 Allendale Road  
King of Prussia, PA 19406

Log	Out 11
Remitter	
Check No.	912674
Amount	\$230
Fee Category	7A
Type of Fee	AMD
Date Check Rec'd.	10/17/88
Date Completed	
By	A. Kumbily

RE: NRC License #37-11438-01

Dear Dr. Glenn:

This letter is to inform you of a status change of our Cobalt Unit and to request an amendment to our Cobalt license.

As we informed you in our letter dated June 8, 1987 (copy enclosed) we have not used our Cobalt Unit for treating patients since January 5, 1987. We have been checking the room radiation monitor, indicator lights, and door interlock on a monthly basis. We now wish to use the Cobalt Unit for a short period of time (about two to three weeks) while our linear accelerator will be "down." We will do a complete calibration prior to using the unit to treat patients.

In a related matter, we would like to amend our license to list our new Radiation Oncologist, Dr. Laurence G. Lines, as the only authorized user. We are enclosing a copy of a license from Tennessee that lists him as an authorized user and a check to cover the fee of \$230.00.

As we would like to schedule our accelerator to be "down" in about a month, we would appreciate prompt action on this matter. Any technical questions should be directed to Robert Surgent, Chief Radiation Therapy Physicist, at 814-437-4581.

Thanking you in advance for your assistance in this matter.

Sincerely,

Michael L. Reichfield  
President

MLR/hc

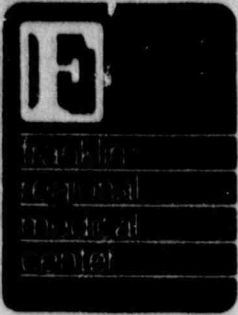
Enclosures (3)

cc: C. Mason, M.D.  
R. Surgent, Physicist

OFFICIAL RECORD COPY ML 10

109596

19 SEP 1988



June 8, 1987

United States Nuclear Regulatory Commission  
Region I  
631 Park Avenue  
King of Prussia, PA 19406

Re: License #37-11438-01

Gentlemen:

This letter is being sent to you upon the advise of your inspector who visited our facility on May 20, 1987.

The purpose of this letter is to inform you that our Cobalt Unit has not been used since January 5, 1987. We have moved to another section of our facility and are using our new linear accelerator. The final status of the Cobalt Unit has not yet been determined. For now, it is secured and the keys are kept in our new department. Since patients are not being treated, spot checks have been discontinued but the radiation room monitor will continue to be checked on a monthly basis. If we decide to again start using the Cobalt Unit, we would first do a complete calibration and also re-initiate complete monthly spot checks.

We will inform you of any change in status of the unit when that change occurs. If you have any further questions, please contact me.

Sincerely,

Michael L. Reichfield  
Vice President of Operations

MLR/hc

cc: R. Surgent  
C. Mason, M.D.

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

**RADIOACTIVE MATERIAL LICENSE**

AMENDMENT 14

Pursuant to Tennessee Department of Health and Environment Regulations, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess and transfer radioactive material listed below; and to use such radioactive material for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules and regulations of the Tennessee Department of Health and Environment and orders of the Division of Radiological Health, now or hereafter in effect and to any conditions specified below.

LICENSEE		3. License number R-9006-F0 amended in its entirety
1. Name Johnson City Medical Center Hospital		4. Expiration date June 30, 1990
2. Address 400 State of Franklin Rd. Johnson City, TN 37601		5. File no. R-9006
5. Radioactive Material (Element and Mass Number)	8. Chemical and/or physical form	9. Maximum Radioactivity and/or quantity of material which licensee may possess at any one time.
A. Cobalt 60	A. Sealed Sources (AECL Models C-151 or C-146)	A. Two (2) sources (maximum output of each source limited to 7260 RHM)
B. Depleted Uranium	B. Metal	B. 143 kilograms

10. Authorized Use  
  
SEE SUPPLEMENTAL SHEETS

**CONDITIONS**

11. Unless otherwise specified, the authorized place of use is the licensee's address stated in item 2. above.

SEE SUPPLEMENTAL SHEETS

Date of Issuance June 26, 1985

For the Commissioner  
Tennessee Department of Health and Environment

By: Debra G. Shultz  
DIVISION OF RADIOLOGICAL HEALTH

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

**RADIOACTIVE MATERIAL LICENSE**

AMENDMENT 14

**Supplementary Sheet**

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License Number R-9006-FO

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10. Authorized Use

- A. One source to be used in an AECL Theratron 780 teletherapy unit for treatment of humans. One source in its shipping container to be in possession of the licensee as necessary to the replacement of the source in the teletherapy unit only.

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12. The licensee shall comply with applicable provisions of 1200-2-4, 1200-2-5, 1200-2-7, and 1200-2-10 of "State Regulations for Protection Against Radiation".

13. Radioactive material authorized by this license shall be used by, or under the supervision of, Walter D. Hankins, M.D., J.J. Range, M.D., James W. Gibson, M.D. or Laurence G. Lines, M.D.

14. The teletherapy facility shall be provided with a system permitting continuous observation of the patient from outside the treatment room during patient irradiation.

15. A. Sealed sources authorized by this license shall be tested for leakage and/or contamination at intervals not to exceed six (6) months. In the absence of a certificate from a transferor indicating that a test has been made within six (6) months prior to transfer, the sealed source shall not be put into use until tested.

- B. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surface of the device in which the sealed source is permanently mounted or stored on which one might expect contamination to accumulate. Records of leak tests shall be kept in units of microcuries and maintained for inspection by the Department.

- C. If the test reveals the presence of 0.005 microcurie or more of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with Department regulations. A report shall be filed within five (5) days of the test with the Division of Radiological Health, Tennessee Department of Health and Environment, 150 9th Avenue North, Nashville, Tennessee 37219-5404, describing the equipment involved, the test results, and the corrective action taken.

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

**RADIOACTIVE MATERIAL LICENSE**

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License Number R-9006-F0

- D. Tests for leakage and/or contamination shall be performed by persons authorized by this Department, the U.S. Nuclear Regulatory Commission, or another Agreement state to perform such services.
16. Prior to initiation of a treatment program, each teletherapy unit shall be equipped with electrical or mechanical stops limiting use of the primary beam of radiation so as to assure compliance with 1200-2-5-.07(1) of "State Regulations for Protection Against Radiation" as evidenced by a radiation survey. Necessary use restrictions shall be fully described in radiation survey reports submitted in accordance with Condition No. 19.
  17. A written instruction shall be posted at the teletherapy machine control. This instruction shall inform the machine operator of the procedure to be followed should he be unable to turn the machine's primary beam of radiation "off" with the controls outside the treatment room. These instructions shall caution individuals to avoid exposure to the primary beam of radiation when in the treatment room and shall include specific instructions for:
    - A. Locating and using the device for manually turning off the teletherapy unit's primary beam of radiation.
    - B. Removing the patient from the treatment room.
    - C. Securing the room against unauthorized entry.
    - D. Notifying the responsible physician or radiation protection officer.
  18. A. Access to the teletherapy room shall be controlled by a door at each entrance. Such doors shall be normally closed.
  - B. Each entrance to the teletherapy room shall be equipped with an electrical interlock system that will turn the teletherapy machine's primary beam of radiation off immediately upon opening of any entrance door. The interlock system shall be connected in such manner that the teletherapy machine's primary beam of radiation cannot be turned on until all treatment room entrance doors are closed and the beam on-off control is reset at the control panel outside the treatment room.

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

**RADIOACTIVE MATERIAL LICENSE**  
AMENDMENT 14

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- C. Electrical interlocks on entrance doors to the teletherapy room shall be tested for proper operation at least once every six months. Records of test results shall be maintained for inspection by the Department.
  - D. In the event of malfunction of any door interlock, the teletherapy machine control shall be locked in the "off" position and not used, except as may be necessary to repair or replacement of the interlock system, until the interlock system is shown to be functioning properly.
19. Prior to initiation of a treatment program, and subsequent to each installation of a teletherapy source, radiation surveys and tests shall be performed in accordance with the following:
- A. A radiation survey shall be made of:
    - (i) The teletherapy source housing, with the teletherapy source in the "off" position. The maximum and average radiation levels at one meter from the teletherapy source in the "off" position shall not exceed 10 milliroentgens per hour and 2 milliroentgens per hour, respectively.
    - (ii) All areas adjacent to the treatment room, with the teletherapy source in the "on" position. The survey, except item (c), shall be performed with a phantom in the primary beam of radiation and shall clearly establish:
      - (a) That radiation levels in restricted areas are not likely to cause personnel exposures in excess of the limits specified in 1200-2-5-.03 of "State Regulations for Protection Against Radiation" and
      - (b) That quantities of radiation in unrestricted areas do not exceed the limits specified in 1200-2-5-.07(1) of "State Regulations for Protection Against Radiation".
      - (c) The intensity of the primary beam of radiation at a specified distance from the teletherapy source.
  - B. Tests shall be made to determine proper operation of:

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

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- (i) Electrical interlocks on entrance doors to the teletherapy treatment room.
- (ii) The teletherapy source "on-off" indicators, both at the source housing and on the teletherapy machine control panel.
- (iii) Electrical or mechanical stops installed for the purpose of limiting use of the primary beam of radiation (restriction of source housing angulation or elevation, carriage or stand travel, and operation of the beam "on-off" mechanism.)
- (iv) The teletherapy treatment timing device.

A report of the results of the above surveys and tests shall be sent to the Division of Radiological Health, Tennessee Department Health and Environment, 150 9th Avenue, North, Nashville, Tennessee 37219-5404, not later than thirty days following each installation of a teletherapy source.

20. Any changes made in the treatment room shielding, location, or use of the teletherapy machine which could result in an increase in radiation levels in unrestricted areas outside the teletherapy treatment room, and made subsequent to the completion of the initial radiation survey performed in accordance with Condition No. 19 shall be evaluated by a radiation survey made in accordance with Item A (ii) of Condition No. 19. A report describing the change(s) and giving the results of the survey(s), shall be sent to the Division of Radiological Health, Tennessee Department of Public Health, 150 9th Avenue, North, Nashville, Tennessee, 37203, not later than thirty days following completion of the change(s).
21. Each teletherapy machine shall be fully inspected and serviced during source replacement or at intervals not to exceed five (5) years whichever comes first, to assure proper functioning of the source exposure mechanism. This inspection and servicing must be performed by persons specifically authorized to do so by the Department, U. S. Nuclear Regulatory Commission or an agreement state and a report of the inspection and servicing must be kept on file for review by the Department.

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

**RADIOACTIVE MATERIAL LICENSE**

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**Supplementary Sheet**

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License Number R-9006-F0

22. The licensee shall maintain complete and accurate records of the receipt and disposal of radioactive material. The licensee shall, for radioactive material no longer useful for any purpose and for any equipment or supplies contaminated with such material for which further use and decontamination is not planned, define those materials as radioactive waste and treat them as such in accordance with the following provisions:
- A. Radioactive waste material shall not be stored with non-radioactive waste.
  - B. A written record of all radioactive waste material shall be maintained until it has been determined by a suitable survey or radioassay that it has decayed to background levels or until it has been shipped to an authorized recipient in accordance with all applicable regulations. Accountability of radioactive waste material prepared for shipment but not yet shipped from the licensee's premises shall be maintained by the licensee by an internal record system such that the licensee is constantly aware of the material's location and the proposed time of shipment. Individuals who are involved in the shipping of such material and/or the storage of such material prior to shipment, shall be trained in the precautions necessary for such handling and storage.
  - C. For material which has decayed to background levels as determined by radioassay or external level as measured with appropriately calibrated instruments, records shall indicate that the material was determined to be no longer radioactive and will indicate the methods and results of the survey or analysis.
  - D. Shipment records of radioactive waste material shall be maintained and the licensee shall require written confirmation from the authorized recipient of such material that this material has been received.
  - E. All records and written confirmations required by this condition shall be maintained for inspection by the Department.

The requirements of this condition are in addition to any other requirements for the handling and/or disposal of radioactive material



7 cont.

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

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License Number R-9006-F0

contained in this license and "State Regulations for Protection Against Radiation".

- 23. Each teletherapy room shall be equipped with a radiation monitoring device which continuously monitors the teletherapy beam condition and is equipped with a back-up battery power supply for emergency operation. This device shall energize a visible signal to make the operator continuously aware of teletherapy beam condition in order that appropriate emergency procedures may be instituted to prevent unnecessary radiation exposure. Operating procedures shall be modified to require daily operational testing of the installed radiation monitor. The use of a survey meter will be made whenever the room monitor is not operational for any reason.
- 24. No servicing or maintenance of this unit which involves the sealed source or electrical or mechanical controls which could cause the sealed source to be moved to the "on" position shall be performed except as authorized by a specific license issued by the Department, U.S. Nuclear Regulatory Commission or an Agreement State.
- 25. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 6, 3, and 9 of this license in accordance with statements, representations, and procedures contained in application dated April 15, 1985, with attachments.

DGS/sik/R-9006-F0  
DRH HOLD 10

109596

19 SEP 1988

OFFICIAL RECORD COPY ML 10

(FOR LFMS USE)  
INFORMATION FROM LTS  
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BETWEEN:

LICENSE FEE MANAGEMENT BRANCH, ARM  
AND  
REGIONAL LICENSING SECTIONS

PROGRAM CODE: 0230U  
STATUS CODE: 0  
FEE CATEGORY: 7A  
EXP. DATE: 19910831  
FEE COMMENTS: -----  
.....

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED

APPLICANT/LICENSEE: FRANKLIN REGIONAL MEDICAL CTR.  
RECEIVED DATE: 880919  
DOCKET NO: 3000492  
CONTROL NO.: 109596  
LICENSE NO.: 37-11438-01  
ACTION TYPE: AMENDMENT

2. FEE ATTACHED

AMOUNT: \$230.00  
CHECK NO.: 912674

3. COMMENTS

SIGNED R. J. Brown  
DATE 88/09/26

B. LICENSE FEE MANAGEMENT BRANCH (CHECK WHEN MILESTONE 03 IS ENTERED 1-51)

1. FEE CATEGORY AND AMOUNT: 7A \$230

2. CORRECT FEE PAID. APPLICATION MAY BE PROCESSED FOR:  
AMENDMENT         
RENEWAL         
LICENSE       

3. OTHER         
      

SIGNED D. Kemp  
DATE 10/13/88