

St. Margaret's Hospital
600 East First Street
Spring Valley, Illinois 61362

July 8, 1985

Materials Licensing Section
U. S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Applicant	<i>July 17/85</i>
Check No.	<i>35052 \$120</i>
Amount Fee Calendar	<i>7/25/85</i>
Type of Fee	<i>amend</i>
Date Check Rec'd	<i>7/25/85</i>
Received By	<i>[Signature]</i>

Re: Amendment to radioactive materials license no. 12-15562-01

Gentlemen:

We wish to amend our radioactive materials license to add Group VI sealed source therapy procedures. Please refer to the pending materials license application (NRC control no. 78105), submitted by Neelima D. Kabre, M.D., of the Valley Cancer Center, Spring Valley, Illinois 61362. Dr. Kabre submitted an application in January 1985 for a new license to use Group VI sealed sources.

Following is information to support our request:

1. Possession Limit:

1000 mCi

2. Authorized Users:

Neelima D. Kabre, M.D.

3. Facilities and Equipment:

Please refer to NRC license application submitted by N. D. Kabre, M.D.

4. Therapeutic Use of Sealed Sources:

The handling and loading of sealed sources will be done only by authorized personnel. Loading procedures will be carried out according to procedures outlined in Dr. Kabre's license application. Only Dr. Kabre's personnel who have been specifically trained in Group VI sealed source handling procedures will be allowed to participate in such therapy procedures.

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We understand forms for documenting the use of Group VI sealed sources have been submitted with Dr. Kabre's license application. Please refer to those forms, which Dr. Kabre's personnel will complete. Only Dr. Kabre or her qualified designates will have access to the source storage area located at the Valley Cancer Center, 600 East First Street, Spring Valley, IL 61362.

V. N. Bulusu, M.S. will be the designated Radiation Safety Officer for Group VI therapy procedures. Please refer to Mr. Bulusu's qualifications included with Dr. Kabre's license application.

Dr. Kabre and her designates will maintain the source accountability records and perform the radiation surveys required for the use of Group VI sealed sources.

The above described responsibilities will be delegated to Dr. Kabre by Mildred Monroe, M.D., who is Radiation Safety Officer for St. Margaret's Hospital.

Patients containing sealed source implants will remain hospitalized until a radiation survey has been performed to confirm all implants have been removed.

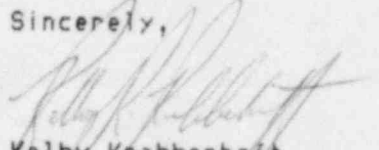
We confirm NRC Regulatory Guide 10.8, Appendix L procedures (attached) or equivalent procedures will be followed by nursing personnel who will handle brachytherapy patients.

Additionally, we wish to notify your office of our planned relocation of the nuclear medicine hot lab facilities to another location within the Radiology Department. Please refer to the attached sketch of the new facilities. Also, the close-out radiation survey with wipe test results is enclosed for your review.

We confirm the radiation levels to the new hot lab area will be maintained in accord with 10 CFR Part 20 regulations, and will remain locked at all times when authorized personnel are not present. The entrance door to the hot lab will be posted "Caution, Radioactive Materials."

We hope all the required information has been provided to make the requested changes. Should additional information be needed, please contact Standard Nuclear Consultants, Ltd. directly at (312) 344-7308. Our hospital check in the amount of \$120 is enclosed to cover the amendment application processing fees. Thank you.

Sincerely,



Kelby Krabbenhoft
Chief Executive Officer

APPENDIX L

RADIATION SAFETY PROCEDURES FOR THERAPEUTIC USE OF SEALED SOURCES*

1. All patients treated with brachytherapy sources will be placed in a private room that has a toilet.
 2. The patient's room will be properly posted or attended in accordance with §§ 20.203 or 20.204 of 10 CFR Part 20.
 3. Surveys of the patient's room and surrounding areas will be conducted as soon as practicable after sources are implanted. Exposure rate measurements will be taken at 3 feet (or 1 m) from the patient with sources implanted, at the patient's bedside, at 3 feet (or 1 m) from the bed, and at the entrance to the room. The Radiation Safety Officer or his designee will then determine how long a person may remain at these positions and will post these times and the exposure rate at 3 feet (or 1 m) from the patient on the patient's chart.
 4. Immediately after sources are implanted, the form "Nursing Instructions for Patients Treated with Brachytherapy Sources" will be completed and attached to the patient's chart.
 5. Radiation levels in unrestricted areas will be maintained less than the limits specified in paragraphs 20.105(b)(1) and (b)(2) of 10 CFR Part 20.
 6. Nurses caring for brachytherapy patients will be assigned film or TLD badges. TLD finger badges will also be assigned to nurses who must provide extended personal care to the patient. Pocket dosimeters may be assigned in addition to a film or TLD badge.
 7. At the conclusion of treatment, a survey will be performed in accordance with paragraph 35.14(b)(5)(vii) of 10 CFR Part 35 to ensure that all sources other than permanent implants have been removed from the patient and that no sources remain in the patient's room or in any other area occupied by the patient. At the same time, all radiation signs will be removed and all film and TLD badges assigned to nurses will be collected. If the patient is to be discharged, the final survey will also include a notation on the patient's chart that the activity remaining in the patient meets conditions for release from the hospital.
 8. Instructions to Nurses
 - a. Special restrictions may be noted on the precaution sheet on the patient's chart. Nurses should read these instructions before administering to the patient. The Radiation Safety Officer should
- be contacted to answer any questions about the care of these patients in regard to radiation safety precautions.
- b. Nurses should spend only the minimum time necessary near a patient for routine nursing care. Obtain and wear a film or TLD badge or a pocket chamber as instructed by the Radiation Safety Officer.
 - c. When a nurse is assigned to a therapy patient, a film or TLD badge should be obtained immediately from the Radiation Safety Officer or his designee. The badge shall be worn only by the nurse to whom it is issued and shall not be exchanged among nurses.
 - d. Pregnant nurses should not be assigned to the personal care of these patients.
 - e. Never touch needles, capsules, or containers holding brachytherapy sources. If a source becomes dislodged, use long forceps and put it in the corner of the room or in the shielded container provided; contact Radiation Therapy, the Radiation Safety Officer, or the Nuclear Medicine Department at once.
 - f. Bed bath given by the nurse should be omitted while the sources are in place.
 - g. Perineal care is not given during gynecologic treatment; the perineal pad may be changed when necessary unless orders to the contrary have been written.
 - h. Surgical dressings and bandages used to cover the area of needle insertion may be changed only by the attending physician or radiologist and MAY NOT BE DISCARDED until directed by the radiologist. Dressings should be kept in a basin until checked by the Radiation Safety Officer or his designee.
- Special orders will be written for oral hygiene for patients with oral implants.
- i. No special precautions are needed for sputum, urine, vomitus, stools, dishes, instruments, or utensils unless specifically ordered, but these items should be saved for a check with a radiation survey meter to ensure that no sources have been inadvertently displaced into them.

* Be sure to submit complete responses to Items 20a through 20f in addition to referencing procedures in Appendix L.

- j. All bed linens must be checked with a radiation survey meter before being removed from the patient's room to ensure that no dislodged sources are inadvertently removed.
- k. These patients must stay in bed unless orders to the contrary are written. In any event, patients will remain in their assigned rooms during the treatment period.
- l. Visitors will be limited to those 18 years of age or over unless other instructions are noted on the precaution sheet on the patient's chart.
- m. Visitors should sit at least 3 feet (or 1 m) from the patient and should remain no longer than the time specified on the form posted on the patient's door and on his chart.
- n. No nurse, visitor, or attendant who is pregnant should be permitted in the room of a patient while brachytherapy sources are implanted in the patient. Female visitors should be asked whether they are pregnant.

o. Emergency Procedures

- (1) If an implanted source becomes loose or separated from the patient, or
- (2) If the patient dies, or
- (3) If the patient requires emergency surgery, immediately call _____

Telephone No. (days) _____

(nights) _____

- p. At the conclusion of treatment, call the Radiation Safety Officer to (1) survey the patient and room, (2) count the radiation sources to be sure that all temporary implants have been removed prior to discharging the patient, and (3) record a summary of the final survey results on the patient's chart. If any permanent implants are to remain in the patient, the Radiation Safety Officer will brief the patient on precautions for minimizing radiation exposure to others after discharge from the hospital.

NURSING INSTRUCTIONS FOR PATIENTS TREATED WITH BRACHYTHERAPY SOURCES

Patient's Name: _____

Room Number: _____ Physician's Name: _____

Isotope and Activity: _____

Date and Time of Administration: _____

Date and Time Sources Are To Be Removed: _____ Isotope: _____

Exposure Rates in mR/hr

Bedside

3 feet from bed

10 feet from bed

_____	_____	_____
_____	_____	_____
_____	_____	_____

(Comply with all checked items.)

- _____ 1. Wear film or TLD badge.
- _____ 2. Wear pocket chambers for supplementary personnel monitoring of individual tasks.
- _____ 3. Wear rubber gloves.
- _____ 4. Tag the following objects and fill out the tag:

_____ door	_____ chart
_____ bed	_____ wrist
- _____ 5. Place laundry in linen bag and save.
- _____ 6. Housekeeping may not enter the room.
- _____ 7. Visiting time permitted: _____
- _____ 8. Visitors must remain _____ from patient.
- _____ 9. Patient may not leave the room.
- _____ 10. Patient may not have visitors.
- _____ 11. Patient may not have pregnant visitors.
- _____ 12. Patient may not have visitors under 18 years of age.
- _____ 13. Patient must have a private room.
- _____ 14. A dismissal survey must be performed before the patient is discharged.

- j. All bed linens must be checked with a radiation survey meter before being removed from the patient's room to ensure that no dislodged sources are inadvertently removed.
- k. These patients must stay in bed unless orders to the contrary are written. In any event, patients will remain in their assigned rooms during the treatment period.
- l. Visitors will be limited to those 18 years of age or over unless other instructions are noted on the precaution sheet on the patient's chart.
- m. Visitors should sit at least 3 feet (or 1 m) from the patient and should remain no longer than the time specified on the form posted on the patient's door and on his chart.
- n. No nurse, visitor, or attendant who is pregnant should be permitted in the room of a patient while brachytherapy sources are implanted in the patient. Female visitors should be asked whether they are pregnant.

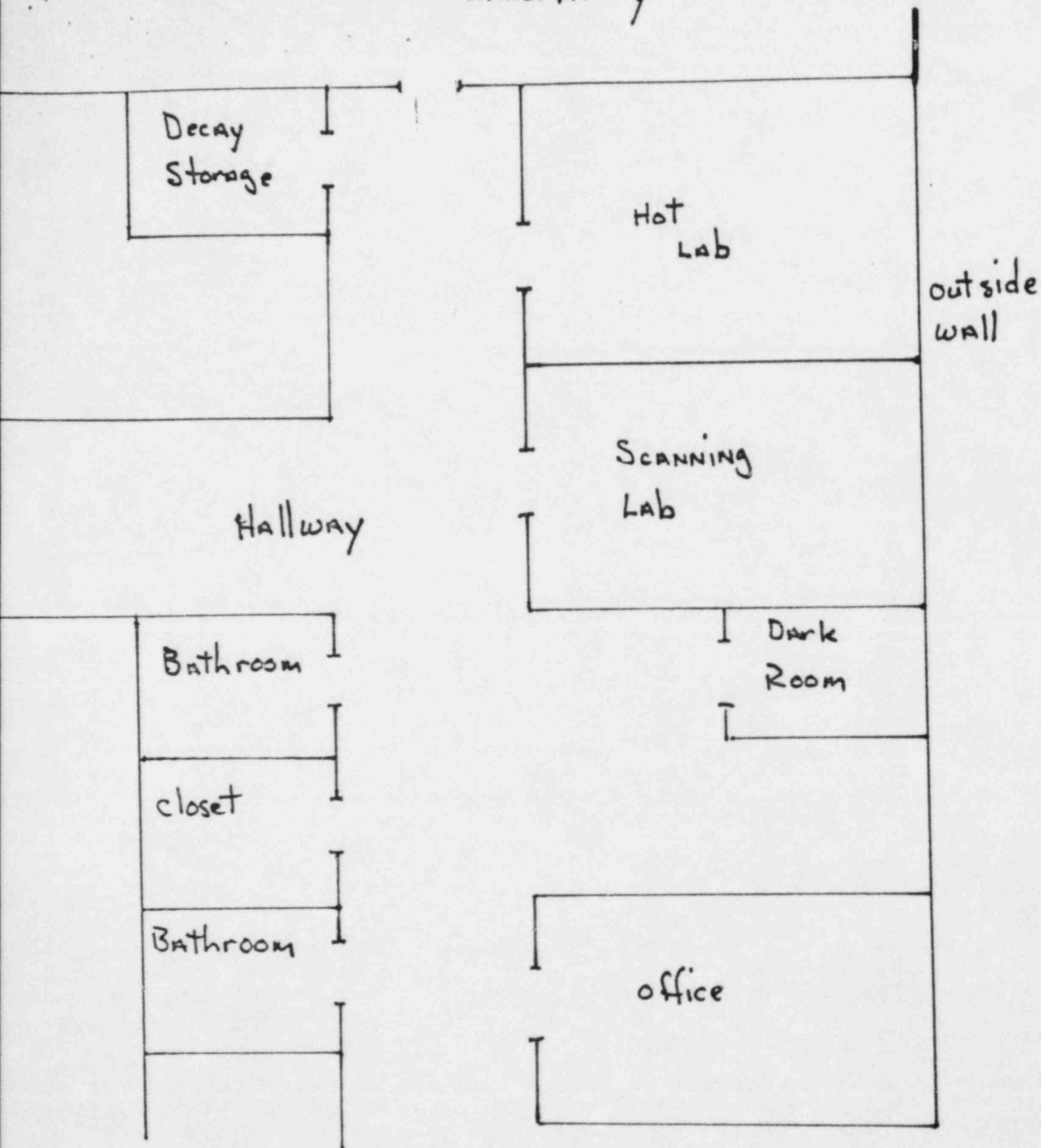
o. Emergency Procedures

- (1) If an implanted source becomes loose or separated from the patient, or
- (2) If the patient dies, or
- (3) If the patient requires emergency surgery, immediately call _____

Telephone No. (days) _____
(nights) _____

- p. At the conclusion of treatment, call the Radiation Safety Officer to (1) survey the patient and room, (2) count the radiation sources to be sure that all temporary implants have been removed prior to discharging the patient, and (3) record a summary of the final survey results on the patient's chart. If any permanent implants are to remain in the patient, the Radiation Safety Officer will brief the patient on precautions for minimizing radiation exposure to others after discharge from the hospital.

Laboratory



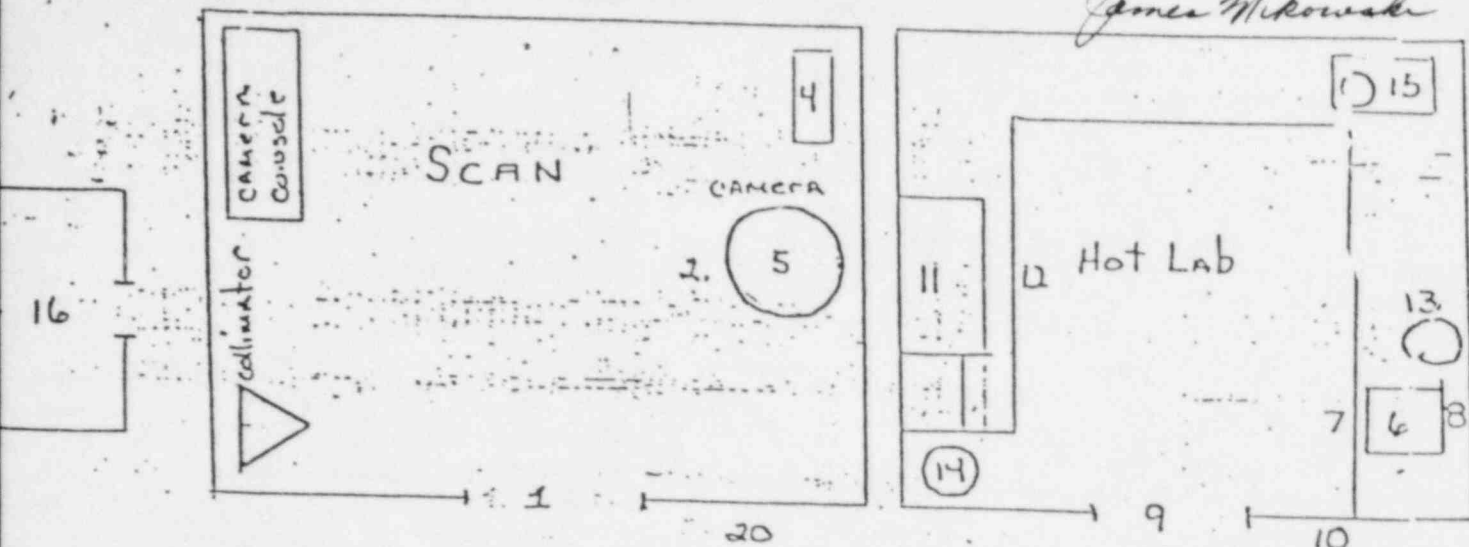
DATE: June 25, 1985

Closeout Radiation Survey of Hot Lab

AREA SURVEY

TECH: James Mikowski

James Mikowski



Procedure: Surveys are performed with a low level GM survey meter (Ludlum model 14-C serial No. PR 7423). Wipe tests are performed with Alco-wiper, or similar absorbent material and inserted into a counting vial and counted in a well counter. Each wipe test area is 100cm². Refer to license and regulatory guides if more details are needed about procedural requirements. Do not forget to record background mr/hr and cpm at bottom of form (#20).

Location	Survey MR/HR	Wipe Test Gross CPM	Net CPM	DPM
1 Camera Rm entrance	N/A			
2 Floor near camera	N/A			
3 Patient cart	N/A	*		
4 Injection table	N/A			
5 Camera detector	N/A	*		
6 Dose prep area	N/A			
7 Front of Shield	0.05 mr/hr	* 24 - 19	5	2200 DPM
8 Behind shield	0.05 mr/hr	26 - 19	7	2200 DPM
9 Hot lab entrance	0.05 mr/hr	23 - 19	4	2200 DPM
10 Outside wall of hot lab	0.05 mr/hr	* 18 - 19	0	2200 DPM
11 Top of generator	N/A			
12 Front of generator	N/A	*		
13 Lead Storage	0.05 mr/hr	18 - 19	0	2200 DPM
14 Waste basket	0.05 mr/hr	26 - 19	7	2200 DPM
15 Dose calibrator	N/A			
16 Storage closet	0.05 mr/hr	* 19 - 19	0	2200 DPM
17 Hot Lab Floor	N/A	*		2200 DPM
18	0.05 mr/hr	21 - 19	2	2200 DPM
19				
20 BACKGROUND (Hallway)		*	19 cpm	

Low level Operational check = 0.20 mr/hr High level Operational check = N/A
 Areas with a wipe test above 200 DPM will be decontaminated.
 Efficiency of well counter is 89%, therefore net counts of 178 CPM is
 equal to 200 DPM.

$$\frac{\text{Net CPM}}{\text{Efficiency}} = \text{Net DPM}$$

Survey Meter: Ludlum 14C
 Probe: 44-7
 Cal. date: 7.9.84

* = Wipe Test

After Survey:

Low level Operational check = 0.20 mr/hr

High level Operational check = N/A mr/hr

Well Counter: Nuclear Chicago
 Well Counter Eff. for 44mTc = 89%

CONTROL NO. 79326