

MATERIALS LICENSE

Amendment No. 24

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter 1, Parts 30, 31, 32, 33, 34, 35, 39, 40 and 70, 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 byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

<p>Licensee</p> <p>1. North Adams Regional Hospital</p> <p>2. Hospital Avenue North Adams, Massachusetts 01247</p>		<p>In accordance with application dated November 22, 1991,</p> <p>3. License number 20-13682-01 is amended in its entirety to read as follows:</p>									
		<p>4. Expiration date November 30, 1997</p>									
		<p>5. Docket or Reference No 030-01969</p>									
<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Any byproduct material identified in 10 CFR 35.100</p> <p>B. Any byproduct material identified in 10 CFR 35.200</p>		<p>7. Chemical and/or physical form</p> <p>A. Any radiopharmaceutical identified in 10 CFR 35.100</p> <p>B. Any radiopharmaceutical identified in 10 CFR 35.200 except gas and generators</p>									
		<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. As needed</p> <p>B. As needed</p>									
<p>9. Authorized use</p> <p>A. Any uptake, dilution and excretion procedure approved in 10 CFR 35.100.</p> <p>B. Any imaging and localization procedure approved in 10 CFR 35.200.</p>											
<p>9302120267 921029 PDR ADDCK 03001969 C PDR</p>											
<p>CONDITIONS</p>											
<p>10. Location of use: North Adams Regional Hospital, Hospital Avenue, North Adams, Massachusetts.</p>											
<p>11. Radiation Safety Officer: Rutledge W. Currie, M.D.</p>											
<p>12. Authorized Users: 080055</p> <table border="0"> <tr> <td>Daniel I. Becker, M.D.</td> <td>35.100; 35.200</td> </tr> <tr> <td>Rutledge W. Currie, M.D.</td> <td>35.100; 35.200</td> </tr> <tr> <td>Joseph R. Kravitz, M.D.</td> <td>35.100; 35.200</td> </tr> <tr> <td>Henry M. Gold, M.D.</td> <td>35.100; 35.200</td> </tr> </table>				Daniel I. Becker, M.D.	35.100; 35.200	Rutledge W. Currie, M.D.	35.100; 35.200	Joseph R. Kravitz, M.D.	35.100; 35.200	Henry M. Gold, M.D.	35.100; 35.200
Daniel I. Becker, M.D.	35.100; 35.200										
Rutledge W. Currie, M.D.	35.100; 35.200										
Joseph R. Kravitz, M.D.	35.100; 35.200										
Henry M. Gold, M.D.	35.100; 35.200										
<p>13. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed material so that at no time is a quantity of radioactive material possessed in excess of a quantity which requires decommissioning funding in accordance with 10 CFR 30.35(d), 10 CFR 40.36(b), or 10 CFR 70.25(d).</p>											

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MATERIALS LICENSE  
SUPPLEMENTARY SHEET

License number

20-13682-01

Docket or Reference number

030-01969

Amendment No. 24

(Continued)

CONDITIONS

14. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

A. Application dated November 22, 1991

B. Letter dated October 1, 1992



For the U.S. Nuclear Regulatory Commission

Original Signed By:

Judith A. Jousra

By

Nuclear Materials Safety Branch  
Region I

King of Prussia, Pennsylvania 19406

Date

OCT 29 1992

OCT 29 1992

License No. 20-13682-01  
Docket No. 030-01969  
Control No. 115807

North Adams Regional Hospital  
ATTN: Patrick Muldoon  
President  
Hospital Avenue  
North Adams, Massachusetts 01247

Dear Mr. Muldoon:

Please find enclosed the renewal of your NRC Material License.

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors or questions, please notify the Region I Material Licensing Section, (215) 337-5093, so that we can provide appropriate corrections and answers.

Please be advised that you must conduct your program involving licensed radioactive materials in accordance with the conditions of your NRC license, representations made in your license application, and NRC regulations. In particular, please note the items in the enclosed, "Requirements for Materials Licensees."

Please note that your license has been written in a format compatible with the revision of 10 CFR 35, "Medical Use of Byproduct Material" (enclosed), effective April 1, 1987. Your licensed material activities must be conducted in accordance with the revised Part 35 regulations

Since serious consequences to employees and the public can result from failure to comply with NRC requirements, the NRC expects licensees to pay meticulous attention to detail and to achieve the high standard of compliance which the NRC expects of its licensees.

You will be periodically inspected by NRC. A fee may be charged for inspections in accordance with 10 CFR Part 170. Failure to conduct your program safely and in accordance with NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC will result in prompt and vigorous enforcement action against you. This could include issuance of a notice of violation, or in case of serious violations, an imposition of a civil penalty or an order

North Adams Regional Hospital

-2-

suspending, modifying or revoking your license as specified in the General Policy and Procedures for NRC Enforcement Actions, 10 CFR Part 2, Appendix C.

We wish you success in operating a safe and effective licensed program.

Sincerely,

Original Signed By:  
Judith A. Joustra

Judith A. Joustra  
Nuclear Materials Safety Branch  
Division of Radiation Safety  
and Safeguards

Enclosures:

1. Amendment No. 24
2. Requirements for Materials Licensees
3. Requirements for Medical Licensees
4. NRC Forms 3 and 313
5. 10 CFR Parts 2, 19, 20, 35 and 170
6. Regulatory Guide 10.8
7. Notice for Medical Radiation Safety Officers

DRSS:RI  
Shaffer/gc  
S.J.B  
10/19/92

DRSS:RI  
Joustra  
10/18/92



**NORTH ADAMS  
REGIONAL  
HOSPITAL**



A subsidiary of NORTHERN BERKSHIRE HEALTH SYSTEMS, INC.  
Hospital Avenue, North Adams, MA 01247 (413) 663-3701

MS 16

J-5

Patrick L. Muldoon  
President

October 1, 1992

License #20-13682-01  
Docket #030-01969  
Main Control #115807

Judith A. Joustra  
Nuclear Materials Safety Branch  
Division of Radiation Safety and Safeguards  
Nuclear Regulatory Commission, Region 1  
475 Allendale Road  
King of Prussia, PA 19406-1415

Dear Ms. Joustra:

This is in reply to your letter dated September 3, 1992 regarding application to renew license #20-13682-01 of this facility.

1. Signed copy of Radiation Safety Delegation of Authority:  
Please see enclosed.
2. Establishment of radiation dose rate and removable contamination trigger levels:
  - a) Our radiation dose rate trigger is .05 MR/hour.
  - b) Our removable contamination trigger level is 920 DPM.
3. Radiation hazard signs:
  - a) Posted on each door entering the scanning room is a conventional three-bladed design of the radiation symbol in magenta with a yellow background with the warning "Caution - Radiation Area".
  - b) Posted on the isotope storage area door is a sign with the conventional three-bladed design of radiation symbol in magenta with yellow background. This sign reads "Caution - Radioactive Materials". The sign also reads "In Case of Emergency Contact" and lists the Radiation Safety Officer, the Radiology Department Manager, the Radiology Assistant Department Manager and their home phone numbers.
4. Equipment listing:
  - a) SQUIBB Medotopes Assay Calibrator (dose calibrator), CRC-6A, serial #62223.
  - b) Ludlum model 2600 spectrometer well counter.
  - c) Medex gamma camera LP61.
  - d) Microdot imager model 3132.
  - e) ADAC DPS 3300 microcomputer.

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115807

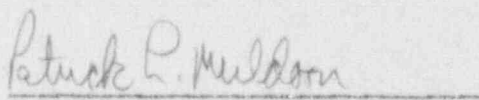
OCT 06 1992

f) Two Ludlum model 14C geiger counters. Each of these instruments has a Ludlum model 44-7 thin end window FM alpha-beta-gamma detector. Both instruments fulfill the requirement of a measurement instrument (capable of measuring dose rates over the range of 1 mr/hr to 1000 mr/hr). Neither of these instruments is currently energy compensated. Each instrument will be sent to Ludlum Measurements, Inc. 501 Oak St., Sweetwater, Texas, Texas calibration license #L0-1963 so that they can be modified in order to meet this requirement. Following this modification, each instrument will be calibrated by Ludlum Measurements, Inc.. This process should be completed for both instruments within 4 weeks of the date of this letter. Following return, any subsequent survey instrument calibration will then be performed by Nuclear Instrument Company. Please see paragraph 7.

5. Each of the Ludlum model 14C geiger counters has a built-in check source with exposure rate determined and recorded at time of calibration. Each instrument is checked with a dedicated check source each day of use.
6. Each of the Ludlum geiger counters fulfills the requirements of a radiation detection and measurement instrument. When one of these instruments is sent for calibration procedure the other instrument serves as back-up.
7. Survey instrument calibration will be performed by Nuclear Instrument Company (USNRC license #20-16972-01) 65 Grove St., Rockland, MA 02370.
8. Adoption of NRC model ALARA program (Appendix G regulatory guide 10.8 revision 2). Please see attached.
9. The expiration date of each unit dose is documented as part of our unit dose records.
10. Multidose records: The lot number and expiration date will be documented in our records.
11. Materials authorized by 10 CFR 35.200: We do not currently use Xe and do not wish to be authorized for use of Xe at this time.

Sincerely yours,

  
Rutledge W. Currie, M.D., R.S.O.

  
Patrick L. Muldoon, President  
North Adams Regional Hospital

MODEL DELEGATION OF AUTHORITY

Memo To: All Employees

From: Chief Executive Officer

Subject: Delegation of Authority

*Patrick L. Muldoon*  
Patrick L. Muldoon, President  
North Adams Regional Hospital

Rutledge W. Currie, M.D. has been appointed Radiation Safety Officer and is responsible for ensuring the safe use of radiation. The Radiation Safety Officer is responsible for managing the radiation safety program; identifying radiation safety problems; initiating, recommending, or providing corrective actions; verifying implementation of corrective actions; and ensuring compliance with regulations. The Radiation Safety Officer is hereby delegated the authority necessary to meet those responsibilities.

The Radiation Safety Officer is also responsible for assisting the Radiation Safety Committee in the performance of its duties and serving as its secretary.

## APPENDIX G

### Model Program for Maintaining Occupational Radiation Exposure at Medical Institutions ALARA (See § 35.20.)

You may use the text as it appears here, saying on your application, "We will establish and implement the model ALARA program that was published in Appendix G to Regulatory Guide 10.8, Revision 2."

If you prefer, you may develop your own ALARA program for NRC review. If you do so, you should consider for inclusion all the features in the model and carefully review the requirements of § 35.20. Say on your application, "We have developed an ALARA program for your review that is appended as ATT 10.2," and append your program.

#### ALARA PROGRAM

North Adams Regional Hospital

\_\_\_\_\_  
(Licensee's Name)

\_\_\_\_\_  
October 1, 1992  
(Date)

#### 1. Management Commitment

- a. We, the management of this (medical facility, hospital, etc.), are committed to the program described herein for keeping individual and collective doses as low as is reasonably achievable (ALARA). In accord with this commitment, we hereby describe an administrative organization for radiation safety and will develop the necessary written policy, procedures, and instructions to foster the ALARA concept within our institution. The organization will include a Radiation Safety Committee (RSC) and a Radiation Safety Officer (RSO).
- b. We will perform a formal annual review of the radiation safety program, including ALARA considerations. This will include reviews of operating procedures and past dose records, inspections, etc., and consultations with the radiation safety staff or outside consultants.
- c. Modifications to operating and maintenance procedures and to equipment and facilities will be made if they will reduce exposures unless the cost, in our judgment, is considered to be unjustified. We will be able to demonstrate, if necessary, that improvements have been sought, that modifications have been considered, and that they have been implemented when reasonable. If modifications have been recommended but not implemented, we will be prepared to describe the reasons for not implementing them.
- d. In addition to maintaining doses to individuals as far below the limits as is reasonably achievable, the sum of the doses received by all exposed individuals will also be maintained at the lowest practicable



level. It would not be desirable, for example, to hold the highest doses to individuals to some fraction of the applicable limit if this involved exposing additional people and significantly increasing the sum of radiation doses received by all involved individuals.

## 2. Radiation Safety Committee

### a. Review of Proposed Users and Uses

- (1) The RSC will thoroughly review the qualifications of each applicant with respect to the types and quantities of materials and methods of use for which application has been made to ensure that the applicant will be able to take appropriate measures to maintain exposure ALARA.
- (2) When considering a new use of byproduct material, the RSC will review the efforts of the applicant to maintain exposure ALARA.
- (3) The RSC will ensure that the users justify their procedures and that individual and collective doses will be ALARA.

### b. Delegation of Authority

(The judicious delegation of RSC authority is essential to the enforcement of an ALARA program.)

- (1) The RSC will delegate authority to the RSO for enforcement of the ALARA concept.
- (2) The RSC will support the RSO when it is necessary for the RSO to assert authority. If the RSC has overruled the RSO, it will record the basis for its action in the minutes of the quarterly meeting.

### c. Review of ALARA Program

- (1) The RSC will encourage all users to review current procedures and develop new procedures as appropriate to implement the ALARA concept.
- (2) The RSC will perform a quarterly review of occupational radiation exposure with particular attention to instances in which the investigational levels in Table 1 are exceeded. The principal purpose of this review is to assess trends in occupational exposure as an index of the ALARA program quality and to decide if action is warranted when investigational levels are exceeded (see Section 6 below for a discussion of investigational levels).\*

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\*The NRC has emphasized that the investigational levels in this program are not new dose limits but, as noted in ICRP Report 26, "Recommendations of the International Commission on Radiological Protection," serve as check points above which the results are considered sufficiently important to justify investigations

Table 1  
Investigational Levels

	Investigational Levels (mrems per calendar quarter)	
	Level I	Level II
1. Whole body; head and trunk; active blood-forming organs; lens of eyes; or gonads	125	375
2. Hands and forearms; feet and ankles	1875	5625
3. Skin of whole body*	750	2250

\*Not normally applicable to medical use operations except those using significant quantities of beta-emitting isotopes.

- (3) The RSC will evaluate our institution's overall efforts for maintaining doses ALARA on an annual basis. This review will include the efforts of the RSO, authorized users, and workers as well as those of management.

3. Radiation Safety Officer

a. Annual and Quarterly Review

- (1) Annual review of the radiation safety program. The RSO will perform an annual review of the radiation safety program for adherence to ALARA concepts. Reviews of specific methods of use may be conducted on a more frequent basis.
- (2) Quarterly review of occupational exposures. The RSO will review at least quarterly the external radiation doses of authorized users and workers to determine that their doses are ALARA in accordance with the provisions of Section 6 of this program and will prepare a summary report for the RSC.
- (3) Quarterly review of records of radiation surveys. The RSO will review radiation surveys in unrestricted and restricted areas to determine that dose rates and amounts of contamination were at ALARA levels during the previous quarter and will prepare a summary report for the RSC.

b. Education Responsibilities for ALARA Program

- (1) The RSO will schedule briefings and educational sessions to inform workers of ALARA program efforts.

- (2) The RSO will ensure that authorized users, workers, and ancillary personnel who may be exposed to radiation will be instructed in the ALARA philosophy and informed that management, the RSC, and the RSO are committed to implementing the ALARA concept.

c. Cooperative Efforts for Development of ALARA Procedures

Radiation workers will be given opportunities to participate in formulating the procedures that they will be required to follow.

- (1) The RSO will be in close contact with all users and workers in order to develop ALARA procedures for working with radioactive materials.
- (2) The RSO will establish procedures for receiving and evaluating the suggestions of individual workers for improving health physics practices and will encourage the use of those procedures.

d. Reviewing Instances of Deviation from Good ALARA Practices

The RSO will investigate all known instances of deviation from good ALARA practices and, if possible, will determine the causes. When the cause is known, the RSO will implement changes in the program to maintain doses ALARA.

4. Authorized Users

a. New Methods of Use Involving Potential Radiation Doses

- (1) The authorized user will consult with the RSO and/or RSC during the planning stage before using radioactive materials for new uses.
- (2) The authorized user will review each planned use of radioactive materials to ensure that doses will be kept ALARA. Trial runs may be helpful.

b. Authorized User's Responsibility to Supervised Individuals

- (1) The authorized user will explain the ALARA concept and the need to maintain exposures ALARA to all supervised individuals.
- (2) The authorized user will ensure that supervised individuals who are subject to occupational radiation exposure are trained and educated in good health physics practices and in maintaining exposures ALARA.

5. Individuals Who Receive Occupational Radiation Doses

- a. Workers will be instructed in the ALARA concept and its relationship to work procedures and work conditions.
- b. Workers will be instructed in recourses available if they feel that ALARA is not being promoted on the job.



6. Establishment of Investigational Levels in Order to Monitor Individual Occupational External Radiation Doses

This institution hereby establishes investigational levels for occupational external radiation doses which, when exceeded, will initiate review or investigation by the RSC and/or the RSO. The investigational levels that we have adopted are listed in Table 1. These levels apply to the exposure of individual workers.

The RSO will review and record on Form NRC-5, "Current Occupational External Radiation Exposures," or an equivalent form (e.g., dosimeter processor's report) results of personnel monitoring not less than once in any calendar quarter as required by § 20.401 of 10 CFR Part 20. The following actions will be taken at the investigational levels as stated in Table 1:

a. Personnel dose less than Investigational Level I.

Except when deemed appropriate by the RSO, no further action will be taken in those cases where an individual's dose is less than Table 1 values for the Investigational Level I.

b. Personnel dose equal to or greater than Investigational Level I but less than Investigational Level II.

The RSO will review the dose of each individual whose quarterly dose equals or exceeds Investigational Level I and will report the results of the reviews at the first RSC meeting following the quarter when the dose was recorded. If the dose does not equal or exceed Investigational Level II, no action related specifically to the exposure is required unless deemed appropriate by the Committee. The Committee will, however, review each such dose in comparison with those of others performing similar tasks as an index of ALARA program quality and will record the review in the Committee minutes.

c. Personnel dose equal to or greater than Investigational Level II.

The RSO will investigate in a timely manner the causes of all personnel doses equaling or exceeding Investigational Level II and, if warranted, will take action. A report of the investigation, any actions taken, and a copy of the individual's Form NRC-5 or its equivalent will be presented to the RSC at its first meeting following completion of the investigation. The details of these reports will be included in the RSC minutes.

d. Reestablishment of investigational levels to levels above those listed in Table 1.

In cases where a worker's or a group of workers' doses need to exceed an investigational level, a new, higher investigational level may be established for that individual or group on the basis that it is consistent with good ALARA practices. Justification for new investigational levels will be documented.



The RSC will review the justification for and must approve or disapprove all revisions of investigational levels.

7. Signature of Certifying Official\*

I hereby certify that this institution has implemented the ALARA Program set forth above.

Patrick L. Muldoon  
Signature

Patrick L. Muldoon, President  
Name (print or type)

President, North Adams Regional Hospital  
Title

\*The person who is authorized to make commitments for the administration of the institution (e.g., hospital administrator).

SEP 03 1992

License No. 20-13682-01  
Docket No. 030-01969  
Control No. 115807

North Adams Regional Hospital  
ATTN: Patrick Muldoon  
President  
Hospital Avenue  
North Adams, Massachusetts 01247

Dear Mr. Muldoon:

This is in reference to your application dated November 22, 1991 to renew License No. 20-13682-01. In order to continue our review, we need the following additional information:

1. Please provide a signed copy of the Radiation Safety Officer delegation of authority as required by 10 CFR 35.23(b). You may wish to use the "Model Radiation Safety Officer Delegation of Authority" on page F-3 of regulatory Guide 10.8.
2. 10 CFR 35.70 (d) and (g) require licensees to establish radiation dose rate and removable contamination trigger levels. Please specify your dose rate trigger level in mR/hr and your removable contamination trigger level in disintegrations per minute (dpm).
3. In Item 9.1 (5) you stated that "standard radiation hazard signs are prominently displayed in the hot lab, on the hot lab door, and on the doors of the scanning room." 10 CFR 20.203 lists the requirements for caution signs. Please specifically describe the appearance of your "standard radiation hazard signs".
4. Please provide a description of the equipment available for the use of material described in Item 5 of your application. This should include survey meters, well-counters, dose calibrators, scintillation equipment, gamma cameras, and diagnostic equipment. Your description should include the manufacturers name and the model number. In addition, 10 CFR 35.220 requires that a licensee possess a portable radiation detection survey instrument capable of detecting dose rates over the range of 0.1 millirem per hour to 100 millirem per hour and a portable radiation measurement survey instrument capable of measuring dose rates over the range of 1 millirem per hour to 1000 millirem per hour. Although your application specifies instruments with

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the required ranges, please confirm that at least one of these fulfills the requirement of a measurement instrument. It should be energy compensated to meet this requirement.

5. 10 CFR 35.51 requires, that at the time of survey meter calibration, the apparent exposure rate from a built-in or owner-supplied check source be determined and recorded and that each survey instrument be checked with the dedicated check source each day of use. Please confirm that your procedures will include these requirements.
6. 10 CFR 35.220 requires that licensees shall have in their possession calibrated survey instruments capable of detection and measurement. Please confirm that back-up detection and measurement survey instruments will be available to replace instruments not available during the calibration procedure.
7. Item 9.2 of your application addresses survey instrument calibration. You appended Appendix B of Regulatory Guide 10.8, Revision 2 and stated that the calibrations will be done by a consultant. Please confirm which method of calibration you intend to use. If you intend to do your own calibrating, the procedures require a calibration source of sufficient activity to provide readings of approximately 30 mR/hr at 100 cm. Please identify the source that you will use by nuclide, activity, and calibration accuracy. You will also have to name who will be doing the calibrations and his training in such procedures.
8. Your application indicates that you have adopted the NRC's Model ALARA Program enclosed as Appendix G to Regulatory Guide 10.8, Revision 2. In adopting the NRC's Model ALARA Program it is required that the licensee submit a completed copy of this program, signed by a management representative. Please submit a completed and signed copy with your response to this letter.
9. You have indicated that you will follow Appendix M.1 procedures in Regulatory Guide 10.8, Revision 2 for unit dose records. 10 CFR 35.53(c) requires, in addition to the data indicated in Appendix M.1, that you document the expiration date. Please confirm that your unit dose record will include the expiration date.
10. You have indicated that you will follow Appendix M.2 procedures in Regulatory Guide 10.8, Revision 2 for multi-dose records. 10 CFR 35.53(c) requires, in addition to the data indicated in Appendix M.2, that you document the lot number and expiration date. Please confirm that your multi-dose record will include the lot number and expiration date.

11. Item 5 b of your application requests authorization for materials authorized by 10 CFR 35.200 which includes Xe, however you did not submit radiation safety procedures for the use of this material. If you wish to be authorized for Xe, you may commit to Appendix O of Regulatory Guide 10.8, Revision 2 or submit procedures of your own that are equivalent. Also please confirm that:
- a. Xe gas will be administered in rooms that are at negative pressure compared to surrounding rooms.
  - b. The ventilation rates (air supply and air exhaust) will be measured every six months in areas of Xe use and the collection systems will be checked monthly.

We will continue our review upon receipt of this information. Please reply in duplicate to my attention at the Region I office and refer to Mail Control No. 115807. The reviewer for this licensing action is Steve Shaffer. If you have any technical questions regarding this deficiency letter please call the reviewer at (215) 337-5313.

In order to continue prompt review of your application, we request that you submit your response to this letter within 30 calendar days from the date of this letter.

Sincerely,

Judith A. Joustra  
Nuclear Materials Safety Branch  
Division of Radiation Safety  
and Safeguards

Enclosures:

- 1. 10 CFR Parts 20 and 35
- 2. Regulatory Guide 10.8

RI:DRSS  
Shaffer

08/17/92

RI:DRSS  
Joustra

08/31/92



DEC 20 1991

Docket No. 030-01969  
License No. 20-13682-01  
Control No. 115807

North Adams Regional Hospital  
ATTN: Patrick Muldoon, President  
Hospital Avenue  
North Adams, Massachusetts 01247

Dear Mr. Muldoon:

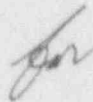
SUBJECT: LICENSE RENEWAL APPLICATION

This is to acknowledge receipt of your application for renewal of material(s) license identified above. Your application is deemed timely filed, and accordingly, the license will not expire until final action has been taken by this office.

Any correspondence regarding the renewal application should reference the control number specified above.

Sincerely,

Original Signed By:  
Ronald R. Bellamy



Sheryl Villar, Chief  
Licensing Assistance Section  
Division of Radiation Safety  
and Safeguards

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12/20/91

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12/20/91

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DTL NORTH ADAMS - 0001.0.0  
12/05/91

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NORTH ADAMS  
REGIONAL  
HOSPITAL



A subsidiary of NORTHERN BERKSHIRE HEALTH SYSTEMS, INC.  
Hospital Avenue, North Adams, MA 01247 (413) 663-3701

030-01969

X

Patrick L. Muldoon  
President

November 22, 1991

U.S. Nuclear Regulatory Commission, Region One  
Nuclear Material Safety Section B  
475 Allendale Road  
King of Prussia, PA 19406

Dear Sirs:

Please find enclosed license renewal application for  
license 20-13682-01 and duplicate copy.

Renewal fee of \$1,000.00 is enclosed.

Sincerely yours,

Rutledge W. Currie, M.D.  
Department of Nuclear Medicine

RWC/dr

Enclosures

License Fee Information

on Application

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115807

11/26/91

030-01969

NRC FORM 313  
(9-90)  
10 CFR 30, 32, 33,  
34, 35 and 40

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0120  
EXPIRES 9-20-93

## APPLICATION FOR MATERIAL LICENSE

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS  
INFORMATION COLLECTION REQUEST: 325 HRS. FORWARD  
COMMENTS REGARDING BURDEN ESTIMATE TO THE INFOR-  
MATION AND RECORDS MANAGEMENT BRANCH (MRS 3714)  
U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC  
20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150  
0120), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON  
DC 20503

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES  
OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

## APPLICATIONS FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

U.S. NUCLEAR REGULATORY COMMISSION  
DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY, NMSS  
WASHINGTON, DC 20555

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS, IF YOU ARE  
LOCATED IN:

CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND,  
MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA,  
RHODE ISLAND, OR VERMONT, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION I  
NUCLEAR MATERIALS SAFETY SECTION B  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PA 19406

ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA,  
PUERTO RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR  
WEST VIRGINIA, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION II  
NUCLEAR MATERIALS SAFETY SECTION  
101 MARIETTA STREET, SUITE 2500  
ATLANTA, GA 30323

## IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR  
WISCONSIN, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION III  
MATERIALS LICENSING SECTION  
799 ROOSEVELT ROAD  
GLEN ELLYN, IL 60137

ARKANSAS, COLORADO, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA,  
NEW MEXICO, NORTH DAKOTA, OKLAHOMA, SOUTH DAKOTA, TEXAS, UTAH,  
OR WYOMING, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION IV  
MATERIAL RADIATION PROTECTION SECTION  
611 RYAN PLAZA DRIVE, SUITE 1000  
ARLINGTON, TX 76011

ALASKA, ARIZONA, CALIFORNIA, HAWAII, NEVADA, OREGON, WASHINGTON,  
AND U.S. TERRITORIES AND POSSESSIONS IN THE PACIFIC, SEND APPLICATIONS  
TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION V  
NUCLEAR MATERIALS SAFETY SECTION  
1460 MARIA LANE, SUITE 210  
WALNUT CREEK, CA 94026

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL  
IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTION.

## 1. THIS IS AN APPLICATION FOR (Check appropriate item):

- ☐ A. NEW LICENSE  
☐ B. AMENDMENT TO LICENSE NUMBER \_\_\_\_\_  
☒ C. RENEWAL OF LICENSE NUMBER 20-13682-01

## 2. NAME AND MAILING ADDRESS OF APPLICANT (Include Zip Code):

North Adams Regional Hospital  
Hospital Avenue  
North Adams, MA 01247  
Attention: Rutledge W. Currie, M.D.

## 3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED:

North Adams Regional Hospital  
Hospital Avenue  
North Adams, MA 01247

## 4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION:

Rutledge W. Currie, M.D.

## TELEPHONE NUMBER

(413)663-3701 x278

SUBMIT ITEMS 5 THROUGH 11 ON 8 1/2 x 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

## 5. RADIOACTIVE MATERIAL

a. Element and mass number, b. chemical and/or physical form, and c. maximum amount  
which will be possessed at any one time

## 6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR  
TRAINING AND EXPERIENCE

## 8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS

## 9. FACILITIES AND EQUIPMENT

## 10. RADIATION SAFETY PROGRAM

## 11. WASTE MANAGEMENT

## 12. LICENSEE FEES (See 10 CFR 170 and Section 170.31)

FEE CATEGORY 7C AMOUNT  
ENCLOSED \$ 1,000.00

13. CERTIFICATION (Must be completed by applicant). THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE  
BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS  
PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, AND 40 AND THAT ALL INFORMATION CONTAINED HEREIN,  
IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948, 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION  
TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

## SIGNATURE - CERTIFYING OFFICER

## TYPED/PRINTED NAME

## TITLE

## DATE

Patrick Muldoon

Patrick Muldoon

President, North Adams  
Regional Hospital

11-22-91

## FOR NRC USE ONLY

TYPE OF FEE <b>REN</b>	FEE LOG <b>Dec 4<sup>th</sup></b>	FEE CATEGORY <b>7C</b>	COMMENTS
AMOUNT RECEIVED <b>\$ 1,000</b>	CHECK NUMBER <b>92740</b>		

## APPROVED BY

## DATE

Sh

12/17/91

115807  
11/26/91

Item 5 - RADIOACTIVE MATERIAL and Item 6 - PURPOSE

<u>Byproduct Material</u>	<u>Amount</u>	<u>Purpose</u>
5.a Material in § 35.100	As Needed	6.a Medical Use
5.b Material in § 35.200	As Needed	6.b Medical Use



Item 7 - Individual Responsible For Radiation Safety Program -  
Their Training and Experience

7.1 Authorized Users for Medical Use

ATT 7.1.1 Daniel I. Becker, M.D.

Proposed uses: Material in § 35.100, material in § 35.200  
(5.a and 5.b).

Dr. Daniel I. Becker is currently an authorized user on  
NRC license (20-13682-01 North Adams Regional Hospital).

7.1 Authorized Users for Medical Use

ATT 7.1.2 Rutledge W. Currie, M.D.

Proposed uses: Material in § 35.100, material in § 35.200  
(5.a and 5.b).

Dr. Rutledge W. Currie is currently an authorized user on  
NRC license (20-13682-01 North Adams Regional Hospital).

Dr. Rutledge W. Currie is designated Radiation Safety Officer.

7.1 Authorized Users for Medical Use

ATT 7.1.3 Henry M. Gold, M.D.

Proposed uses: Material in § 35.100, material in § 35.200  
(5.a and 5.b).

Dr. Henry M. Gold is currently an authorized user on  
NRC license (20-13682-01 North Adams Regional Hospital).

7.1 Authorized Users for Medical use

ATT 7.1.4 Joseph R. Kravitz, M.D.

Proposed uses: Material in § 35.100, material in § 35.200  
(5.a and 5.b).

Dr. Joseph R. Kravitz is currently an authorized user on  
NRC license (20-13682-01 North Adams Regional Hospital).



Item 7 - Individual Responsible for Radiation Safety Program -  
Their Training and Experience

7.2 Authorized Users for Nonmedical Use

NA

7.3 Radiation Safety Officer

Rutledge W. Currie, M.D. is the designated Radiation  
Safety Officer (See 7.1.2 on page 3 of application)

Item 8.1 - Training Program

We will establish and implement the model training program that was published in Appendix A to Regulatory Guide 10.8, Revision 2, and have appended a table ATT 8.1.1 that identifies the groups of workers who will receive training and the method and frequency of training.

Item 8.2 - Other Training Program

NA

Item 9.1 - Annotated Drawing (See ATT 9.1)

Item 9.2 - Survey Instrument Calibration

We will establish and implement the model procedure for calibrating survey instruments that was published in Appendix B to Regulatory Guide 10.8, Revision 2. Survey instrument calibration is performed by Nuclear Instrument Company, based in Rockland, MA. Please see page 12 of application.

Item 9.3 - Dose Calibrator Calibration

We will establish and implement the model procedure for calibrating our dose calibrator that was published in Appendix C to Regulatory Guide 10.8, Revision 2. Dose calibrator calibration is performed by Alexander Filimonov, our consultant physicist. Please see page 12 of application.

Item 9.4 - Personnel Monitor Program

We will establish and implement the model personnel external exposure monitoring program published in Appendix D to Regulatory Guide 10.8, Revision 2.

Item 9.5 - Imaging Equipment QA - Mobile Equipment

NA

Item 9.6 - Other Equipment and Facilities

NA

Item 10.1 - Radiation Safety Program

We will issue the model Radiation Safety Committee Charter and Radiation Safety Officer Delegation of Authority that was published in Appendix F to Regulatory Guide 10.8, Revision 2.

Item 10.2 - ALARA Program

We will establish and implement the model ALARA program that was published in Appendix G to Regulatory Guide 10.8, Revision 2.

Item 10.3 - Leak Test

We will establish and implement the model procedure for leak testing sealed sources that was published in Appendix H to Regulatory Guide 10.8, Revision 2.

Item 10.4 - Safe Use of Radiopharmaceuticals

We will establish and implement the model safety rules published in Appendix I to Regulatory Guide 10.8, Revision 2.

Item 10.5 - Spill Procedures

We will establish and implement the model spill procedures published in Appendix J to Regulatory Guide 10.8, Revision 2.

Item 10.6 - Ordering and Receiving

We will establish and implement the model guidance for ordering and receiving radioactive material that was published in Appendix K to Regulatory Guide 10.8, Revision 2.

Item 10.7 - Opening Packages

We will establish and implement the model procedure for opening packages that was published in Appendix L to Regulatory Guide 10.8, Revision 2.

Item 10.8 - Unit Dosage Records

We will establish and implement the model procedure for unit dosage record that was published in Appendix M.1 to Regulatory Guide 10.8, Revision 2.

Item 10.9 - Multidose Vial Records

We will establish and implement the model procedure for multidose vial record system that was published in Appendix M.2 to Regulatory Guide 10.8, Revision 2.

Item 10.10 - Molybdenum Concentration Records

NA

We currently use the Unit Dose System. Our supplier is Syncor, based in Cohoes, NY. Please see page 12 of application.

Item 10.11 - Implant Source Use Records

NA

Item 10.12 - Area Survey Procedures

We will establish and implement the model procedure for area surveys that was published in Appendix N to Regulatory Guide 10.8, Revision 2.

Item 10.13.1 - Worker Dose from Noble Gases

NA

No noble gases are currently used at this facility.

Item 10.13.2 - Worker Dose from Aerosol

We will collect spent aerosol in a shielded trap and for reusable traps monitor the trap affluent with an air contamination monitor that we will check regularly according to the manufacturer's instructions.

Item 10.13.3 - Aerosol and Gas Concentration in Effluents

We will not directly vent spent aerosols and gases to the atmosphere and therefore no effluent estimation is necessary.

Item 10.13.4 - Spilled Gas Clearances Times

NA



Item 10.14 - Radiopharmaceutical Therapy

NA

Item 10.15 - Implant Therapy

NA

Item 10.16 - Other Safety Procedures

NA

Item 11.1 - Waste Disposal

We will establish and implement the general guidance and model procedures for waste disposal that were published in Appendix R to Regulatory Guide 10.8, Revision 2.

Item 11.2 - Other Waste Disposal

NA

Attachment 8.1.1

<u>Worker Group</u>	<u>Training Method</u>	<u>Frequency</u>
1. Technologists	Lecture following material outline in NUREG 1134	Yearly and as needed *
2. Secretarial and Clerical Staff	"	"
3. Security Personnel	"	"
4. Maintenance Personnel	"	"
5. Housekeeping Personnel	"	"
6. Departmental Nursing Personnel	"	"

- \* 1. Before assuming duties with, or in the vicinity of, radioactive materials.
2. During annual refresher training.
3. Whenever there is a significant change in duties, regulations, or the terms of the license.

Consultant physicist is Alexander Filimonov, Ph.D., P.O. Box 378, Hanover, NH 03755. New Hampshire Agreement State License Number 130R.

Survey instrument calibrator is Nuclear Instrument Company, 65 Grove Street, Rockland, MA 02370. NRC license 20-16972-01.

Unit Dose supplier is Syncor International Corporation #034, Pharmacy Service Center, 36 Green Mountain Drive, Cohoes, NY 12047. New York Department of Labor Operating License Number 2364-3250.

Survey Instrument #1 Geiger Counter Model 14C/44-7, serial number PRO76287. Lowest range is 0 - .2 mr/hour and highest range is 0 - 2000 mr/hour.

Survey Instrument #2 Geiger Counter Model 14C/44-7, serial number PRO082309, Ludlum Measurements, Inc. Lowest range 0 - .2 mr/hour, highest range 0 - 2000 mr/hour.

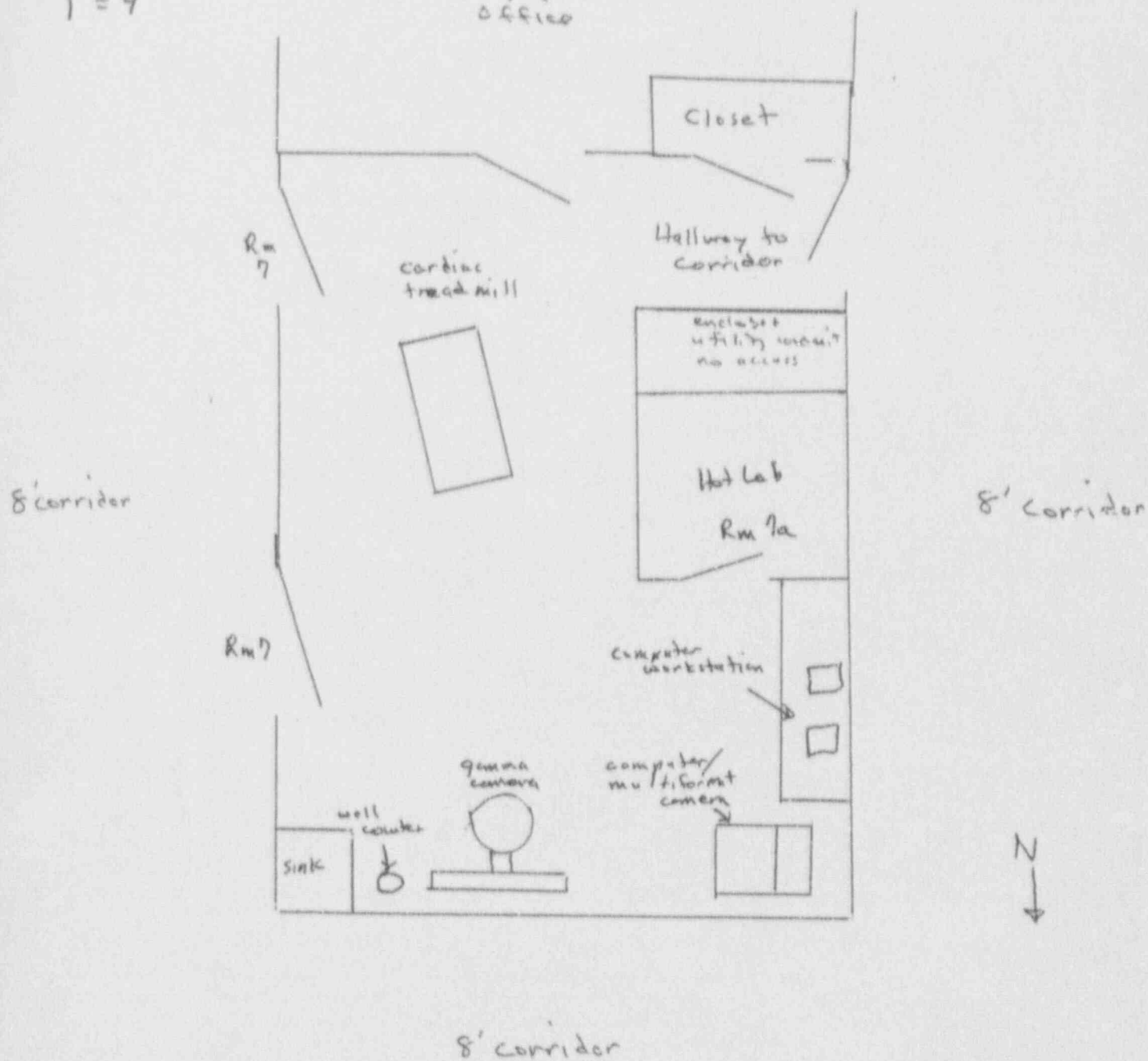
Item 9.1 - Facilities and Equipment

1. See attached sketches.
2. The nuclear medicine scanning room and hot lab are at the end of a double corridor with minimal traffic.
3. The isotope preparation area is located within the scanning room. The connecting door locks automatically and key is available only to authorized personnel.
4. As this facility currently uses a unit dose system, no generators are needed and minimal radioactive waste is generated. This waste is placed behind lead brick shielding or behind flexible lead shielding beneath the counter. It is allowed to decay to background. The work countertop, floors, and walls of hot lab are waterproof and easily cleaned.
5. Standard radiation hazard signs are prominently displayed in the hot lab, on the hot lab door and on the doors of scanning room.
6. Corridors adjacent hot lab and scanning room have no patient waiting areas.
7. Housekeeping in hot lab will be done by technologist.
8. Emergency phone number of RSO and other personnel are posted on the hot lab door.



1" = 4'

Physician  
Office



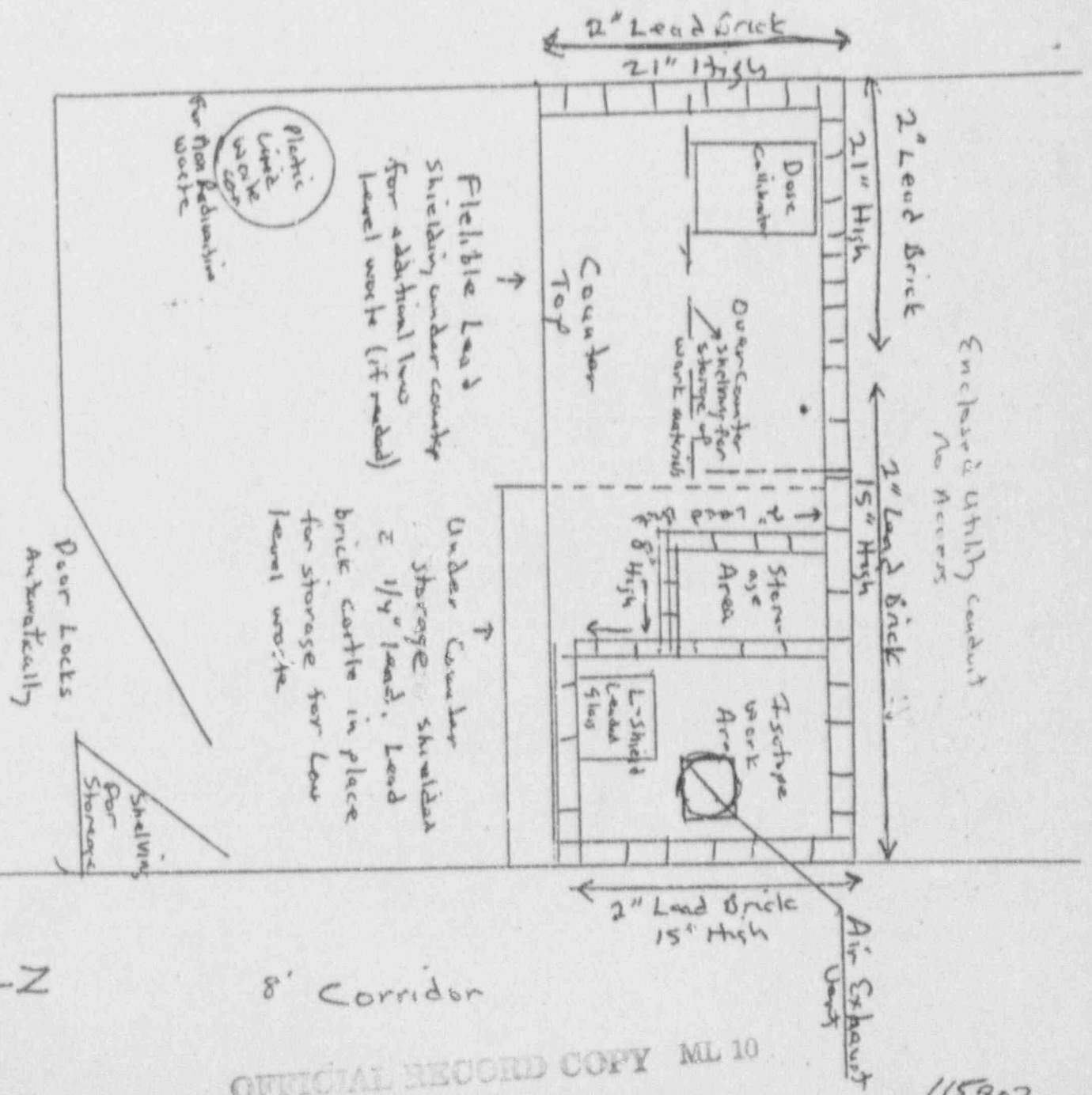
ATT. Jan 9.1

Hot Lab

Thallium  
Stress  
Test  
Area

1" = 1'

Scanning Area



BETWEEN:

LICENSE FEE MANAGEMENT BRANCH, ARM  
AND  
REGIONAL LICENSING SECTIONS

(FOR LFMS USE)  
INFORMATION FROM LTS

PROGRAM CODE: 02120  
STATUS CODE: 2  
FEE CATEGORY: 7C  
EXP. DATE: 19911231  
FEE COMMENTS: CODE 23  
DECOM FIN ASSUR REQ: N

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED

APPLICANT/LICENSEE: NORTH ADAMS REGIONAL HOSPITAL  
RECEIVED DATE: 911126  
DOCKET NO: 3001969  
CONTROL NO.: 115807  
LICENSE NO.: 20-13682-01  
ACTION TYPE: RENEWAL

2. FEE ATTACHED

AMOUNT: \$1000.00  
CHECK NO.: 092746

3. COMMENTS

SIGNED Rebecca J. Brown  
DATE 11/26/91

B. LICENSE FEE MANAGEMENT BRANCH (CHECK WHEN MILESTONE 03 IS ENTERED 11/1)

1. FEE CATEGORY AND AMOUNT: 7C \$1000

2. CORRECT FEE PAID. APPLICATION MAY BE PROCESSED FOR:

AMENDMENT -----  
RENEWAL -----  
LICENSE -----

3. OTHER -----  
-----

SIGNED Sh  
DATE 12/17/91