NRC FORM 374 (7-95)

U.S. NUCLEAR REGULATORY COMMISSION

MATERIALS LICENSE

Amendment No. 45

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 I, Parts 30, 31, 32, 33, 34, 35, 36, 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.

398340

Licensee	
1. Lester E. Cox Medical Center	In accordance with application dated March 24, 1995 3. License Number 24-01143-06 is renewed in its entirety to read as follows:
2. 1423 N. Jefferson Springfield, MO 65802	4. Expiration Date April 30, 2003
	5. Docket or Reference No. 030-09784

6. Byproduct, Source, and/or Special Nuclear Material	7. Chemical and/or Physical Form	8. Maximum Amount that Licensee May Possess at Any One Time Under This License
A. Any byproduct material identified in 10 CFR 35.100	A. Any radiopharmaceutical identified in 10 CFR 35.100	A. As needed
B. Any byproduct material identified in 10 CFR 35.200	B. Any radiopharmaceutical identified in 10 CFR 35.200	B. As needed
C. Any byproduct material identified in 10 CFR 35.300	C. Any radiopharmaceutical identified in 10 CFR 35.300	C. As needed
D. Any byproduct material source identified in 10 CFR 35.400	D. Any brachytherapy identified in 10 CFR 35.400	D. As needed
E. Any byproduct material identified in 10 CFR 31.11	E. Prepackaged Kits	E. As needed
E. Iridium-192	F. Sealed Sources (Byk Mallinckrodt Model CI LB V)	F. Two sources not to exceed 12 curies each

011

110117

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number
24-01143-06

Docket or Reference Number
030-09784

Amendment No. 45

9. Authorized Use:

A. Medical use described in 10 CFR 35.100.

B. Medical use described in 10 CFR 35.200.

C. Medical use described in 10 CFR 35.300.

D. Medical use described in 10 CFR 35.400 and survey instrument calibration.

E. In vitro studies.

F. One source to be used in a Nucletron Corporation MicroSelectron-HDR remote afterloading brachytherapy unit for interstitial and intracavitary radiotherapy. Once source in its shipping container to be in possession of the license as necessary for replacement of source in the irradiation device. The licensee may possess 24 Ci iridium-192 (not to exceed 12 Ci per source) for use in the Nucletron Corporation Micro Selection-HDR, provided the individual source activity does not exceed 10 Ci at the time of installation, and the source is installed by an authorized individual.

CONDITIONS

10. Locations of Use:

Lester E. Cox Medical Center-North
1423 N. Jefferson
Springfield, MO 65802

Lester E. Cox Medical Center-South
3801 South National Avenue
Springfield, MO 65807

Cox Health Center South
Plaza II, Building II, Suite 100
3850 South National
Springfield, MO 65807

11. Radiation Safety Officer: William Nalesnick, Ph.D.

12. A. Authorized Users:

A. L. R. Brent, M.D., for material in 10 CFR 35.100, 35.200, 35.300, 35.400 (excluding survey instrument calibration) and 31.11.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number
24-01143-06

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030-09784

Amendment No. 45

12. Authorized Users (Continued)

B. Brian K. Hall, M.D., for material in 10 CFR 35.100 and 35.200.

C. D. E. Nelson, M.D., for material in 10 CFR 35.100, 35.200, and 31.11.

D. H. C. Krahn, M.D., for material in 10 CFR 35.100, 35.200, 35.300, and 31.11.

E. J. D. Rogers, M.D., for material in 10 CFR 35.400 (excluding survey instrument calibration) and iridium-192 in remote afterloading brachytherapy unit.

F. John Clouse, M.D., for material in 10 CFR 35.300, 35.400 (excluding survey instrument calibration), 31.11 and iridium-192 in remote afterloading brachytherapy unit.

G. James R. Wolski, M.D., for material in 10 CFR 35.100, 35.200, 35.300, and 31.11.

H. Bruce L. Hedgepeth, for material in 10 CFR 35.100 and 35.200.

I. Kimberly A. Prater, M.D., for material in 10 CFR 35.100, 35.200, and 31.11.

J. Anne Smid, M.D., for material in 10 CFR 35.100, 35.200, and 31.11.

K. M. A. Albritton, M.D., for material in 10 CFR 35.400 (excluding survey instrument calibration) and iridium-192 in remote afterloading brachytherapy unit.

L. William J. Nalesnik, Ph.D., for material in 10 CFR 35.400 for survey instrument calibration only.

M. David M. Sullivan, M.D., for material in 10 CFR 35.100 and 35.200.

N. Norman B. Ely, M.D., for material in 10 CFR 35.100, 35.200 and 35.300.

O. John Ritter, M.D., for material in 10 CFR 35.100 and 35.200.

P. John A. Sullivan, M.D., for material in 10 CFR 35.100 and 35.200.

Q. John E. Bartlett, M.D., for material in 10 CFR 35.100 and 35.200.

B. Brachytherapy Physicist: William Nalesnick, Ph.D.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

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030-09784

Amendment No. 45

13. A. Sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed 6 months or at such other intervals as specified by the certificate of registration referred to in 10 CFR 32.210.

B. In the absence of a certificate from a transferor indicating that a leak test has been made within 6 months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.

C. Sealed sources need not be leak tested if:

(i) they contain only hydrogen-3; or

(ii) they contain only a radioactive gas; or

(iii) the half-life of the isotope is 30 days or less; or

(iv) they contain not more than 100 microcuries of beta and/or gamma emitting material or not more than 10 microcuries of alpha emitting material; or

(v) they are not designed to emit alpha particles, are in storage, and are not being used. However, when they are removed from storage for use or transferred to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source or detector cell shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.

D. The leak test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 30.50(b)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within 5 days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region III, ATTN: Chief, Nuclear Materials Safety Branch, 801 Warrenville Road, Lisle, Illinois 60532-4351. The report shall specify the source involved, the test results, and corrective action taken.

E. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically licensed by the Commission or an Agreement State to Perform such services.

14. A. Access to the rooms housing the MicroSelectron-HDR afterloading brachytherapy device shall be controlled by a door at each entrance.

B. The entrance to the irradiation room shall be equipped with an electrical interlock system that will cause the source to return to the shielded position immediately upon opening of the entrance door. The interlock system shall be connected in such a manner that the source cannot be placed in the irradiation position until the entrance door is closed and the source "on-off" control is reset at the control panel.

C. Electrical interlocks on the entrance door to the irradiator room shall be tested for proper operation at least once each day of use.

D. In the event of malfunction of the door interlock, the irradiation device shall be locked in the "off" position and not used, except as may be necessary for repair or replacement of the interlock system, until the interlock system is shown to be functioning properly.

15. Prior to initiation of a treatment program, and subsequent to each source exchange using the MicroSelectron-HDR remote afterloading brachytherapy devices, radiation surveys and tests shall be performed in accordance with the following:

A. A radiation survey shall be made of:

(1) The irradiator source housing, with the source in the shielded position. The maximum radiation levels at 10 centimeters from the surface of the main source safe shall not exceed 1 milliroentgen per hour.

(2) All areas adjacent to the treatment room with the source in the "irradiation" position. The survey shall clearly establish:

(a) That radiation levels in restricted areas are not likely to cause personnel exposure in excess of the limits specified in 10 CFR 20.101 (10 CFR 20.1201).

(b) That radiation levels in unrestricted areas do not exceed the limits specified in 10 CFR 20.105(b) (10 CFR 20.1301).

16. The following shall be performed only by manufacturer's representatives or persons specifically authorized by the Commission or an Agreement State to perform such services:

A. Installation and replacement of the sealed sources contained in the MicroSelectron-HDR afterloading brachytherapy device(s).

B. Any maintenance or repair operations on the irradiator involving work on the source head, the source driving unit, or other mechanism that could expose the source, reduce the shielding around the source, or compromise the safety of the unit and result in increased radiation levels.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number
24-01143-06

Docket or Reference Number
030-09784

Amendment No. 45

17. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed material to quantities below the minimum limit specified in 10 CFR 30.35(d) for establishing decommissioning financial assurance.

18. 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, except for minor changes in the medical use radiation safety procedures as provided in 10 CFR 35.31. 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 March 24, 1995; and

B. Letters dated February 18, 1995 (with attachments), June 26, 1995, February 17, 1997 (two letters) and March 19, 1997.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date 4/1/97

By Kevin G. Pierce
Nuclear Materials Licensing Branch, Region III

COPY

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 2B
EXP. DATE: 19950331
FEE COMMENTS: CODE 23
DECOM FIN ASSUR REQD: N

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED
APPLICANT/LICENSEE: LESTER E. COX MEDICAL CENTER
RECEIVED DATE: 950327
DOCKET NO: 3009784
CONTROL NO.: 398340
LICENSE NO.: 24-01143-06
ACTION TYPE: RENEWAL

2. FEE ATTACHED
AMOUNT: $1,400
CHECK NO.: 097870

3. COMMENTS

SIGNED for Dave Bell D. Haney
DATE 3-31-95

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

1. FEE CATEGORY AND AMOUNT: 7C $1400.00

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

3. OTHER

SIGNED
DATE 4/4/95

RECEIVED
APR 07 1995
REGION III

NRC FORM 313 (6-93)
10 CFR 30, 32, 33, 34, 35, 36, 39 and 40

U. S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR MATERIAL LICENSE

APPROVED BY OMB: NO. 3150-0120
EXPIRES 6-30-96

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 9 HOURS. SUBMITTAL OF THE APPLICATION IS NECESSARY TO DETERMINE THAT THE APPLICANT IS QUALIFIED AND THAT ADEQUATE PROCEDURES EXIST TO PROTECT THE PUBLIC HEALTH AND SAFETY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, 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.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-0001

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:

LICENSING ASSISTANT SECTION
NUCLEAR MATERIALS SAFETY BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

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

NUCLEAR MATERIALS LICENSING SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION II
101 MARIETTA STREET, NW, SUITE 2900
ATLANTA, GA 30323-0199

IF YOU ARE LOCATED IN:

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

MATERIALS LICENSING SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION III
801 WARRENVILLE RD.
LISLE, IL 60532-4351

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

NUCLEAR MATERIALS LICENSING SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TX 76011-8064

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

RADIOACTIVE MATERIALS SAFETY BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION V
1450 MARIA LANE
WALNUT CREEK, CA 94596-5368

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 JURISDICTIONS.

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

- [ ] A. NEW LICENSE
- [ ] B. AMENDMENT TO LICENSE NUMBER _____
- [X] C. RENEWAL OF LICENSE NUMBER 24-01143-06

2. NAME AND MAILING ADDRESS OF APPLICANT *(Include Zip code)*

Lester E. Cox Medical Center
1423 N. Jefferson
Springfield, MO 65802

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

L.E. Cox Medical Ctr North
1423 N. Jefferson
Springfield, MO 65802

L.E. Cox Medical Ctr South
3801 S. National
Springfield, MO 65807

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

William J. Nalesnik, PhD.

TELEPHONE NUMBER
(417)836-3436

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 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 / AMOUNT ENCLOSED $ 1400.00

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, 36, 39 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.

CERTIFYING OFFICER – TYPED/PRINTED NAME AND TITLE	SIGNATURE	DATE
William Senneff, Assistant Administrator	[signature]	3/24/95

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
Renewal	APR 3 III	7C	$1400.00	44870	RECEIVED MAR 27 1995

APPROVED BY: SC
DATE: 4/4/95

NRC FORM 313 (6-93) PRINTED ON RECYCLED PAPER

398340

REGION III

COX RADIATION CENTERS

COX MEDICAL CENTER NORTH
1423 NORTH JEFFERSON AVENUE
SPRINGFIELD, MISSOURI 65802
417/836-3436

COX MEDICAL CENTER SOUTH
3801 SOUTH NATIONAL AVENUE
SPRINGFIELD, MISSOURI 65807
417/885-6115

US Nuclear Regulatory Commission
Region III
801 Warrenville Road
Lisle, Illinois 65032-4351

March 24, 1995

Re: Renewal of Material License #24-01143-06

Dear Reviewer:

Enclosed is an application for the renewal of the license named above.

We have submitted a separate ammendment for an HDR remote afterloader on March 22, 1995.

We have also submitted a revised QMP program on March 20, 1995 in response to the NRC review of the original QMP.

We also have two physicians in Nuclear Medicine, Drs. John Bartlett and **John** Sullivan whom we had attempted to include on our license (docket number 96933) but were refused on the basis of recentness of training. We have been working with these individuals and will submit the paperwork as either an addendum to this application or as part of the original ammendment.

If you have any questions regarding this application please contact me at 417-836-3436.

Thank you for your consideration of this matter

Sincerely,

William J. Nalesnik, Ph.D.
RSO

Items #5 & 6 **RADIOACTIVE MATERIAL DESIRED & ITS PURPOSE**

BYPRODUCT MATERIAL	AMOUNT DESIRED	PURPOSE	AUTHORIZATION
35.100 (Uptake, Dilution)	As needed	Medical Use	Yes
35.200 (Generators, Kits)	As needed	Medical Use	Yes
35.300 (Therapy)	As needed	Medical Use	Yes
35.400 (Implant)	500 mCi	Medical Use	Yes
35.400 (Eye Applicator)	150 mCi	*Medical Use	Yes
53.500 (Sealed Src Diagnostic)		Medical Use	No
I-131	As needed	Therapy <30 mCi/pt	Yes
I-131	As needed	Therapy >30 mCi/pt	Yes
Xe-133	250 mCi	Medical Use	Yes
35.11 (Prepackaged kits)	As needed	Medical Use	Yes

*Please note:

1) We currently possess a Sr eye applicator which is not being used clinically; however, we would like to keep this option open. We have not listed this on our QMP. If we re-activate this for clinical use, we will modify our QMP accordingly.

2) We have made separate ammendment application for an HDR remote afterloader utilizing a 12 Ci Ir-192 source. We intend to calibrate this with a re-entrant well ionization chamber. We would like to use the eye applicator as a constancy source for the re-entrant well ionization chamber since it would entail less radiation exposure than a Cs-137 therapy source for checking.

Item #7.1: **AUTHORIZED USERS/RSO TRAINING AND EXPERIENCE**

The following users are currently active on our present license. No changes are necessary.

L. R. Brent, M. D.
P. S. Quinn, M. D.
D. E. Nelson, M. D.
Henry Krahn, M. D.
Joseph D. Rogers, M. D.
John Clouse, M. D.
James Wolski, M. D.
Kimberly Prater, M. D.
Anne Smid, M. D.
Michael Albritton, M. D.
David Sullivan, M. D.
Norman E. Ely, M. D.
John Ritter, M. D.

The following individuals are to be deleted from our previous license:

P. S. Quinn, M.D.
William Ludwig, M.D.
Ashoka Bhargava, M.S.

Please add the following radiologists to our license:

Brian Keith Hall, M.D., for material in 10 CFR 35.100 and 10 CFR 35.200

Bruce Llewellyn Hedgepeth, M.D., for material in 10 CFR 35.100 and 10 CFR 35.200

Please authorize our physicist and radiation safety officer for the following:

William J. Nalesnik, Ph.D., for material in 10 CFR 35.400 for calibration of survey meters and re-entrant ionization chambers only.

Item #7.2: **RADIATION SAFETY OFFICER**

William J. Nalesnik, Ph.D.

Item #8: PERSONNEL 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 tabe ATT 8.1 that identifies the groups of workers who will receive training and the method and frequency of training.

We have appended ATT 8.1 that identifies the groups of workers who will receive training and the method and frequency of training:

Att 8.1: All Hospital Employees, Clinical, Nursing, Housekeeping, Nuclear Medicine Technologist, and Security Personnel

All Hospital Employees: All hospital employees are required to participate in a mandatory safety and re-orientation program annually. There is a 15 minute time slot alloted for Radiation Safety. At this session which is conducted by the educational inservice department all employees are instructed on the general rudiments of radiation safety, i.e. what radiation is, where we find it in the hospital, what radiation signs mean, pregnancy issues, and where to go for additional information.

Clinical, Nursing, Housekeeping, Nuclear Medicine Technologists, and Security Personnel: These individuals are given site specific training on an annual basis commensurate with their degree of involvement with the radiation program. Personnel will be instructed:

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

Instruction for individuals in attendance will include:

1. Applicable regulations and license conditions
2. Areas where radioactive material is used or stored.
3. Potential hazards associated with radioactive material in each area where the employees will work.
4. Appropriate radiation safety procedures
5. In-house work rules.

6. Each individual's right to report unsafe conditions to the Radiation Safety Officer
7. Appropriate response to emergencies or unsafe conditions
8. Worker's right to be informed of occupational radiation exposure and bioassay results
9. Locations where the licensee has posted or made available notices, copies of pertinent regulations, and copies of pertinent licenses and license conditions (including applications and applicable correspondence) as required by 10 CFR Part 19.

Lectures will be given by the Educational Inservice Department, Nuclear Medicine Technologist, Radiation Therapy Technologists, the Radiation Safety Officer or a consulting physicist. Parts 19 and 20 of 10 CFR Regulatory Guide 10.8, Rev. 2., Dated 8/87, "A Guide for Preparation of Applications for Medical Programs" will be used as source material for these lectures.
Video-taped presentations, demonstrations and handouts will be used as methods of training.

New Nuclear Medicine Physicians will be oriented by the Physician Director of Nuclear Medicine and the Chief Nuclear Medicine Technologist before beginning their duties in Nuclear Medicine

Item 9 Facilities and Equipment

Item 9.1 Annotated Drawing Annotated drawings of our areas of use are presented as ATT 9.1. These include:

Nuclear Medicine Department North
Stress Testing Lab North
Radiation Oncology Source Storage Area North

Nuclear Medicine Department South & Stress Testing Lab
Radiation Oncology Source Storage Area South

The following items are provided for handling radioactive material and will be used appropriately:

a. disposagble gloves
b. syringe shields
c. lead vial shields
d. tongs and forceps
e. 2" x 4" lead bricks
f. work bench area with stainless steel top and absorbent paper where appropriate
g. survey meters
h. L-block shield

The area designated Hot Lab will be used for receipt, storage (including waste), preparation and measurement of radioactive material. Radioactive waste will be stored in the lead brick storage area in labeled containers. The Hot Lab will be locked when nuclear medicine personnel are off duty and will be made available only to those people authorized by Nuclear Medicine. A diagram of the nuclear medicine area is enclosed.

All radioactive sources are stored in such a manner (lead, concrete, or refrigerator) such that the exposure in the controlled area does not exceed 2 mR/hr at the surface of the barrier and in such a manner that individuals in uncontrolled areas will not receive more than 2 mR in any one hour or 100 mR in one year.

Currently we do not use a Mo-99/Tc-99m generator, but obtain our radiopharmaceuticals from a radiopharmacy.

Radioactive materials obtained from radiopharmacy suppliers will be stored in their original shipping containers. If necessary, the doses will be placed behind additional shielding to reduce activity levels emitted from the container to 2 mR/hr or less.

Syringe shields will be used on all accessories requiring the transfer or radiopharmaceuticals from vial to vial and in drawing up patient doses. Syringe shields will also be used in the administration of doses to patients except when the patient's well being may be compromised. Under these circumstances, the syringes containing the dose will be kept shielded up to the moment of injection.

Steps in the preparation of compounds requiring periods of heating, shaking, agitation or mixing will be performed utilizing lead shielding and/or mechanical or ultrasonic agitation equipment and/or remote handling devices (tongs, forceps, etc.) such that levels during the above period as measured by a low level survey meter do not exceed 2.0 mR/hr when practicable.

All posible set-ups wil be made on easily cleanable surfaces. All trays and all other work surfaces will be covered with disposable absorbent paper. Each syringe shall be conspicuously marked with a label that shows the radiopharmaceutical name or its abbreviation, the clinical procedure to be performed, or the patient's name.

All vial shields must be labeled to indicate the radiopharmaceutical name or its abbreviation.

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.

Radiation survey instruments must be calibrated annually and after servicing.

At present our survey instruments are calibrated by:

R. M. Wester & Associates, St. Peter, Mo. NRC License #24-20091-01

Radiation Consultants of Mid America, Inc. Kansas license #33-B429-01

The manufacturer.

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 with the following exception:

Pursuant to 10 CFR 35.50 (b)(3) Our dose calibrator will be tested for linearity upon installation and at least quarterly thereafter over a range from the highest dosage that will be administered to a patient or human research subject to 1.1 megabecquerels (30 microcuries).

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 with the following additions to comply with 10 CFR 20.1201:

a. All individuals who are occupationally exposed to ionizing radiatiion and who are likely to receive 10% of the legal limits (500 mR/yr total body) will be issued a film or TLD whole body badge that will be processed by a contract service on a monthly basis. In certain instances in which it is documented that readings are minimal, the cycle time may be extended to three months for TLD.

b. Other individuals within the facility who are exposed to radiation on an occasional basis, such as security personnel who deliver packages, materials transport personnel who deliver packages, secretarial personnel who work in the Nuclear Medicine and Therapy departments but not directly with patients, and nurses who occasionally care for patients who have received diagnostic dosages will be monitored if it appears that they will exceed 10% (500 mR/yr) of the legal limits. The individuals working full time in Nuclear Medicine at our facility routinely receive less than 500 mR/yr. The

likelihood of individuals working outside the department and being exposed on an occasional basis to radiation is that they will receive significantly less than the individuals working full time in Nuclear Medicine. For this reason, we do not anticipate having to monitor those individuals.

c. Female workers who have declared their pregnancy will be monitored to ensure that the fetal exposure does not exceed 500 mRem. The female worker's previous exposures will be reviewed to ensure that the fetus has not received more than 500 mRem since conception. If during the gestational period the mother should decide to "undeclare" her pregnancy, the facility is not responsible for ensuring that the fetus does not exceed 500 mRem.

d. Other individuals who are exposed to radiation on an occasional basis such as security personnel who deliver packages, secretarial personnel who work in the nuclear medicine clinic but do not work with patients, and nurses who occasionally care for patients who have received diagnostic doses will not normally be issued exposure monitors.

e. Pregnant employees will be issued a second film badge to be worn at the abdominal area. This badge will be issued to the mother after she declares in writing to her supervisor who communicates this to the RSO that she is pregnant. The dose to the fetus will be reported as a separate item by the contract service. The dose to the fetus will be kept to below 500 mRem unless the mother undeclares her pregnancy. The second badge will be maintained through the remainder of the pregnancy in order to verify the total dose to the fetus.

f. Exposure limits

10 CFR 20.1201		Monitor Requirement
Total Effective Dose:	5000 mRem/yr	>500 mRem/yr
Lens of the Eye:	15000 mRem/yr	>1500 mRem/yr
Shallow/Extremity:	50000 mRem/yr	>5000 mRem/yr
Fetal:	500 mRem	>50 mRem
General Public	100 mRem/yr	>10 mRem/yr

Our film and TLD badge service is currently provided by:

Landauer, Inc.

9.5 INSTRUMENTATION:

Survey meters:

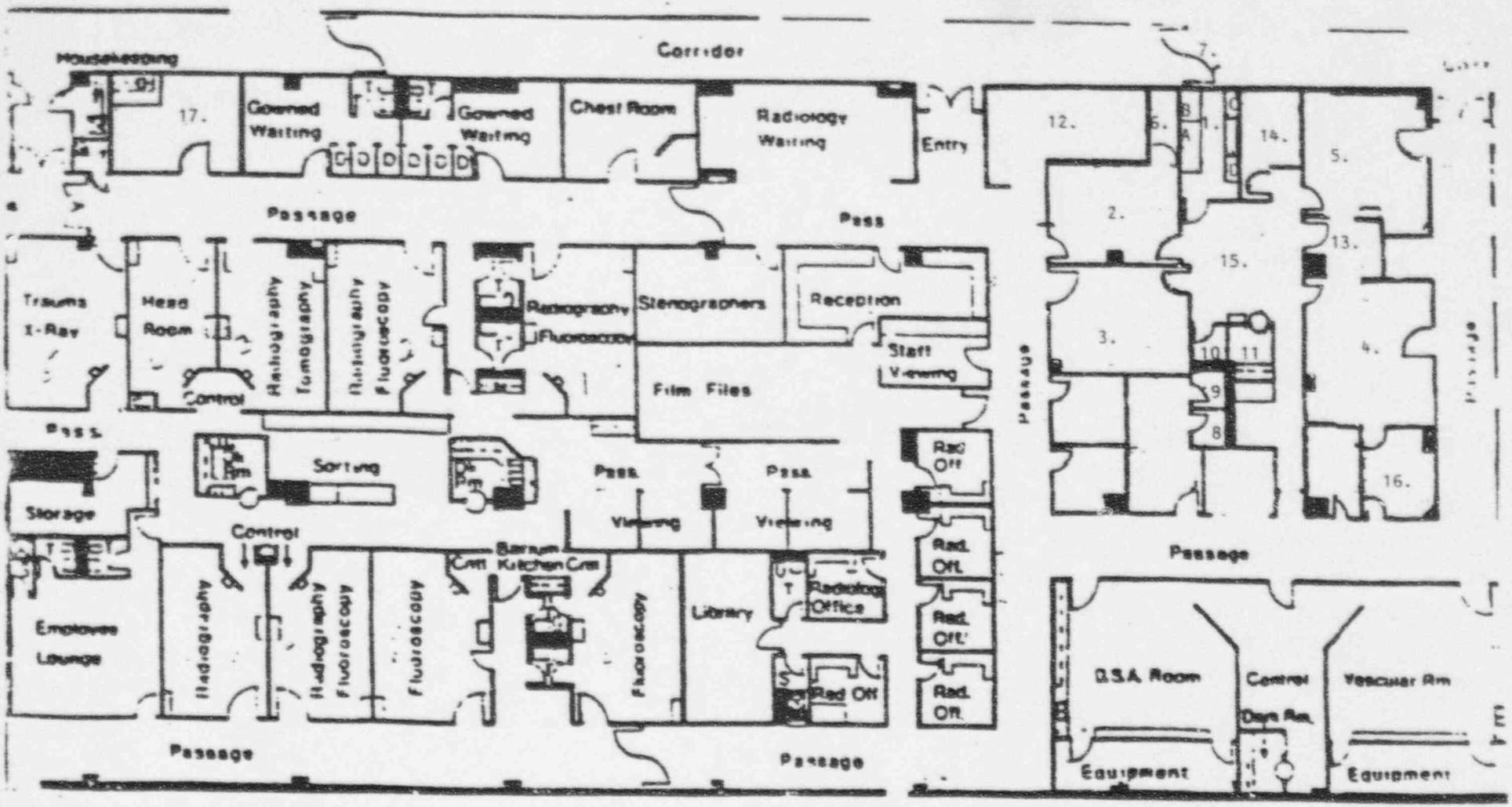
Manufacturer	Model	No. Avail.	Range
Victoreen	498	1	0 - 1000 mR/hr
Ludlum	14C	1	0 - 2000 mR/hr
Ludlum	3	2	0 - 200 mR/hr
Picker	655-186	1	0 - 2000 mR/hr
Keithley	35159	1	0 - 20,000 mR/hr
Ludlum	17777	1	0 - 200 mR/hr

9.6 OTHER EQUIPMENT AND FACILITIES:

We have submitted an ammendment request under separate cover for an HDR afterloader which which be located at our south facility.

ATT: 9.1 Facility Diagrams

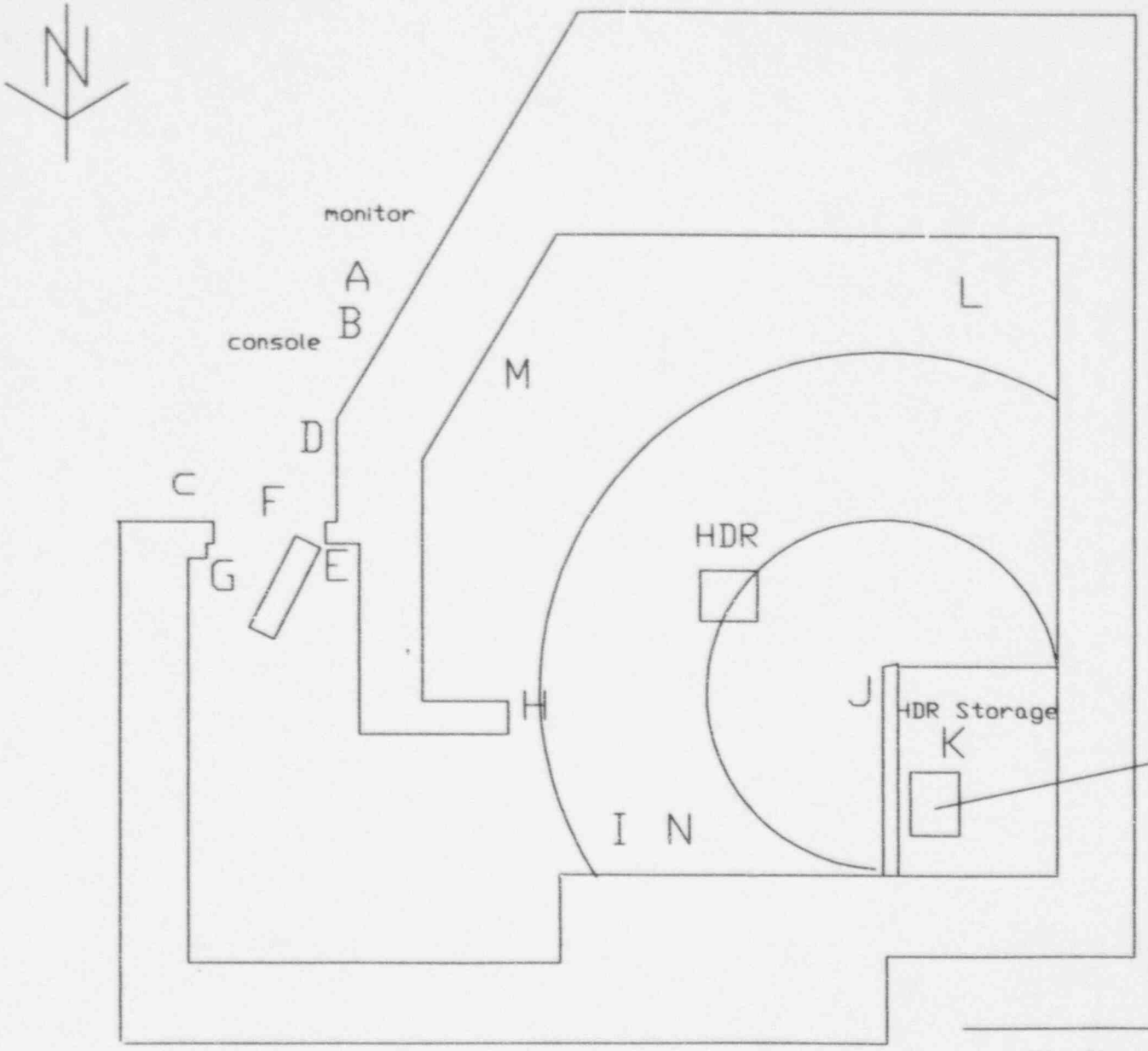
a. Nuclear Medicine South & Stress Lab
b. Radiation Oncology Source Storage Area
c. Nuclear Medicine North
d. Nuclear Medicine Stress Lab
e. Radiation Oncology North Source Storage



NUCLEAR MEDICINE SOUTH

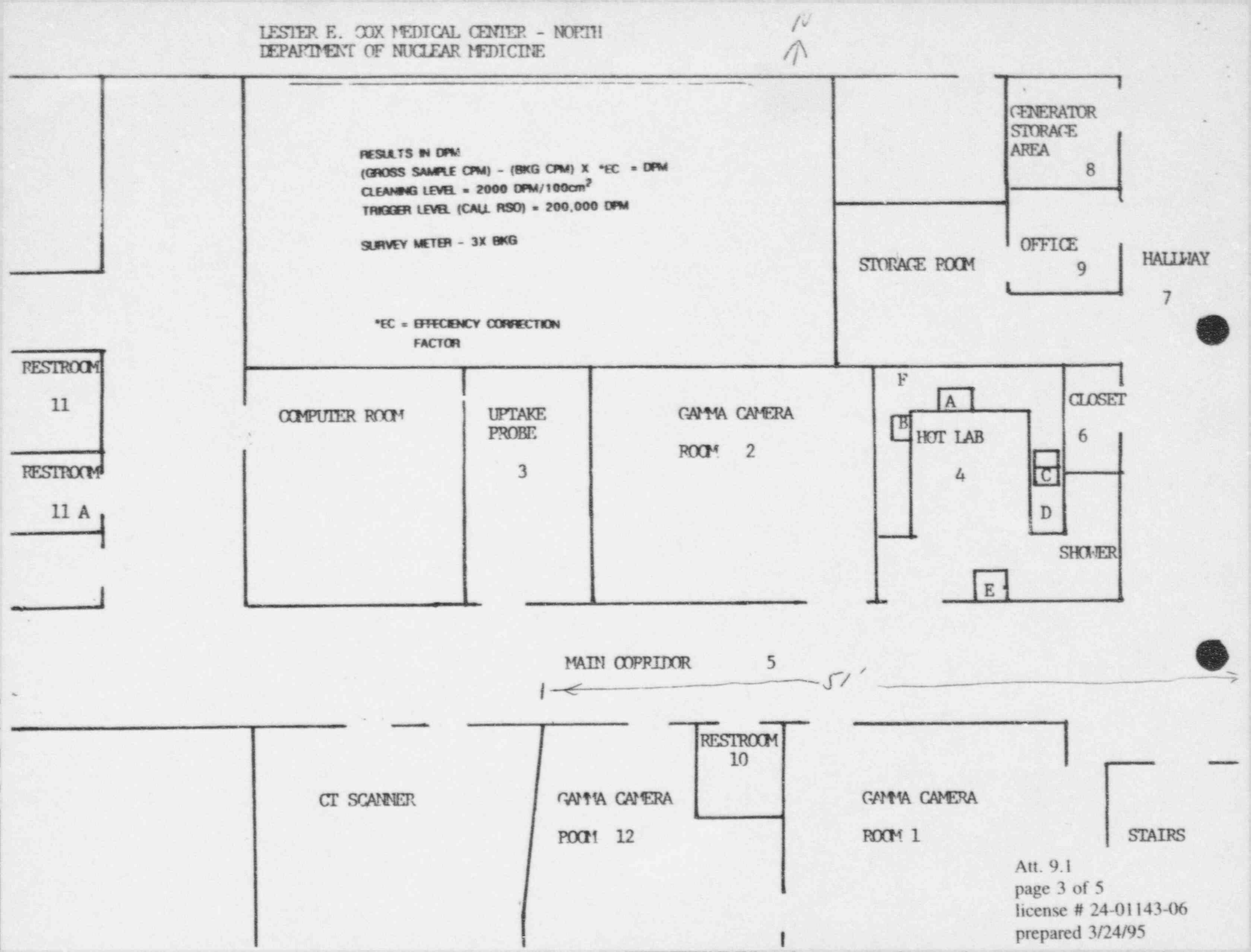
1. HOT LAB
   - A. Dose Disposition Counter
   - B. Vent Hood
   - C. Sink
   - D. Refrigerator
2. Room A
3. Room B
4. Room C
5. Room D
6. Radioactive Storage
7. Hallway
8. Restroom (wtg. mens)
9. Restroom (wtg. womens)
10. Employee Restroom
11. Darkroom
12. Cart Storage
13. Computer Room
14. Office
15. Control Area
16. Doctors Office
17. Treadmill Room

COX SOUTH BRACHYTHERAPY SOURCE STORAGE AREA



A. Power fail test switch
B. Accelerator/HDR Select Switch
C. Emergency Off
D. PrimAlert Remote Monitor
E. Accelerator Door Interlock
F. HDR Warning Light Over Door
G. HDR Door Interlock Switch
H. Emergency Off
I. PrimAlert Main Unit & Backup P
J. HDR Room Connect
K. Locked HDR & Source Storage
L. Locked Drawer for HDR K
M. Video Monitor
N. Video Monitor

LESTER E. COX MEDICAL CENTER - NORTH
DEPARTMENT OF NUCLEAR MEDICINE



Att. 9.1
page 3 of 5
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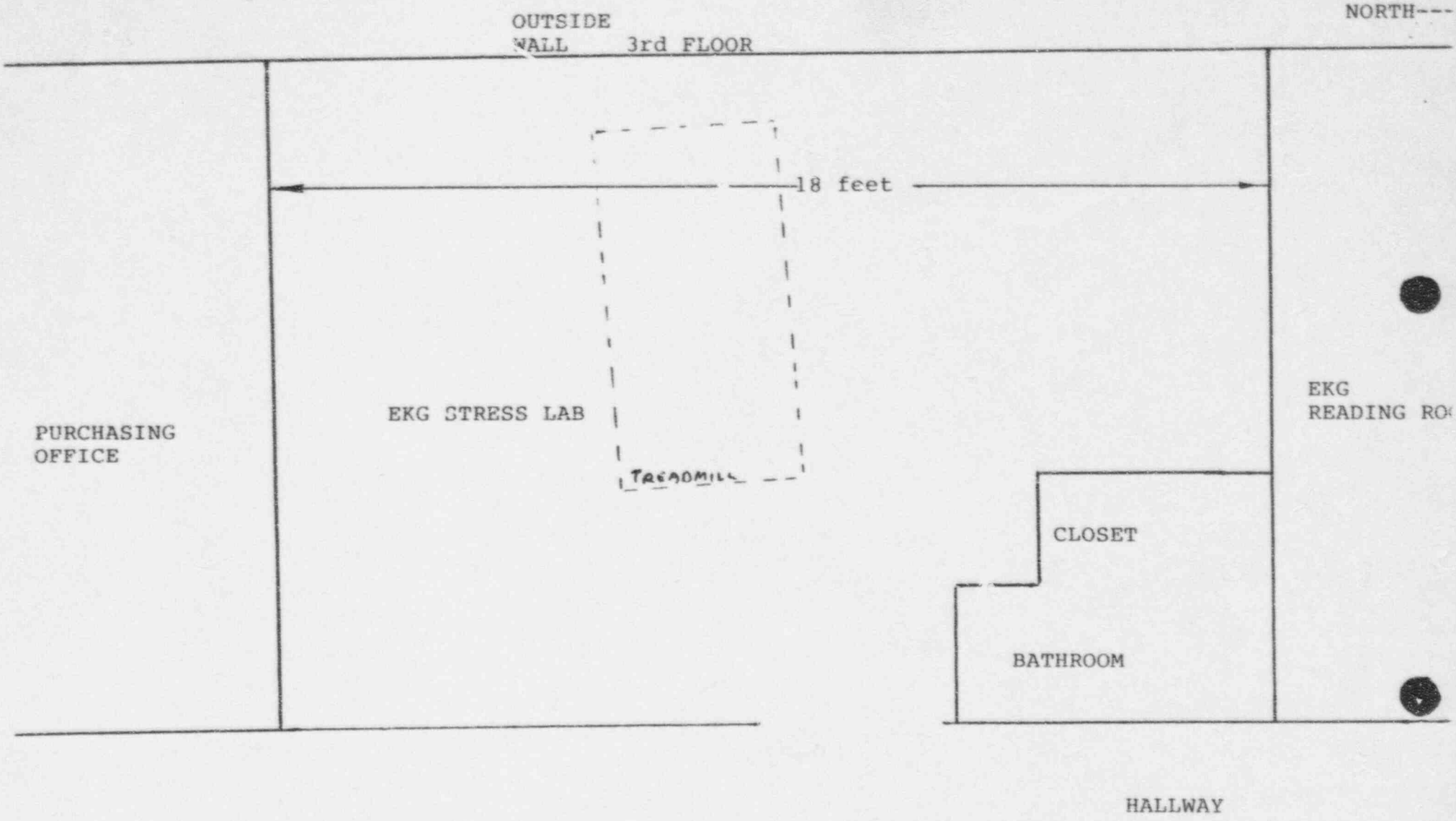
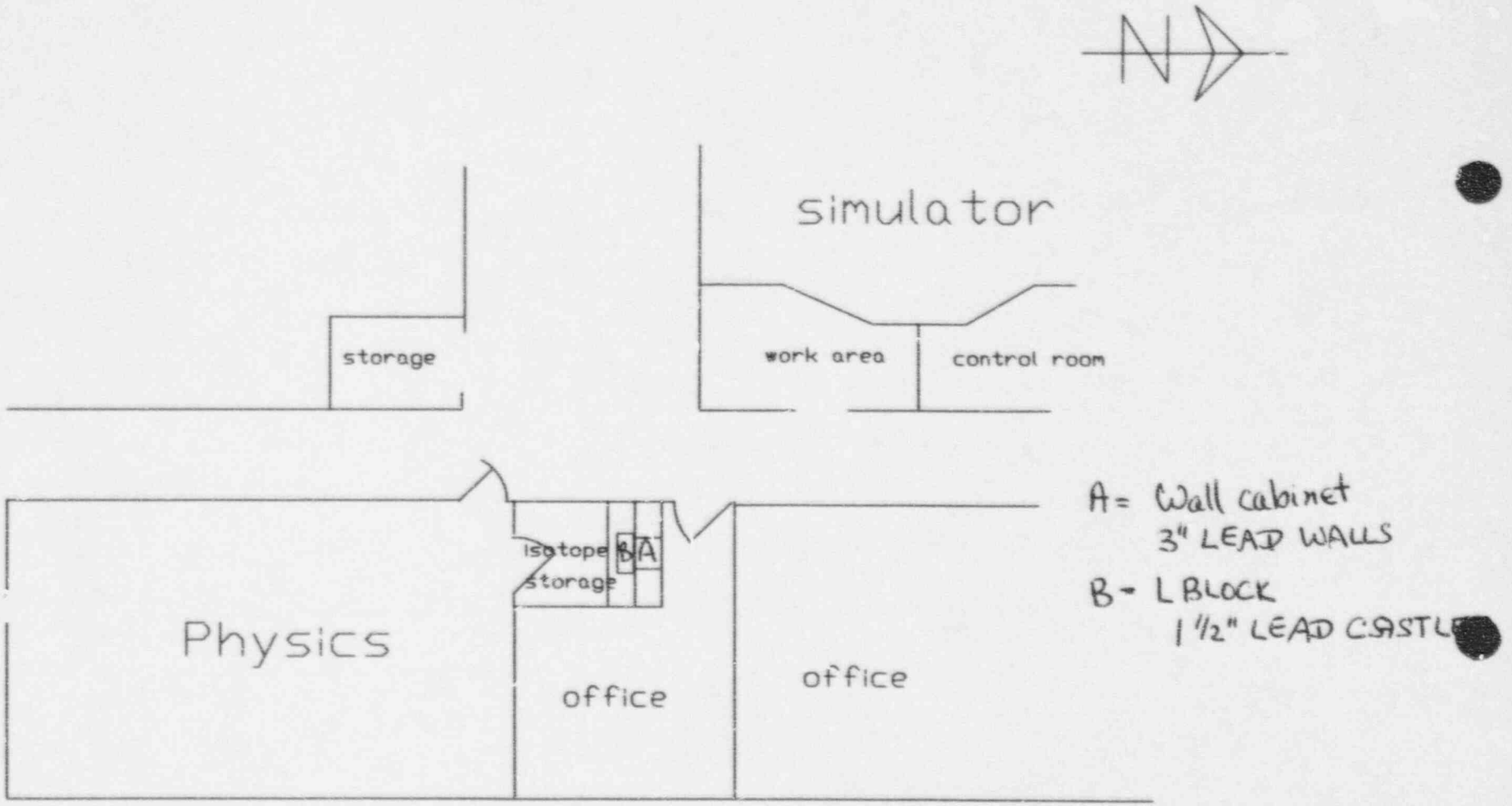
prepared 3/24/95

NUCLEAR MEDICINE NORTH
THALLIUM TREADMILL STRESS LAB
H-100 wing 3rd floor



Cox North Isotope Storage Area
Radiation Oncology Department



Item 10.1 Radiation Safety Committee/Radiation Safety Officer

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.

Leak tests of our sealed diagnostic sources are performed by:

Radiation Consultants of Mid America, Shawnee Mission, Kansas License #33-B429-01

Diagnostic Technology Consultants, Inc., Mission, Kansas License #23-B429-01

Their licenses are on file with NRC.

Leak tests of our therapy sources are performed by our physicist.

Item 10.4 Safe Use of Radiopharmaceuticals

We have developed rules for the safe use of radiopharmaceuticals for your review that are appended as ATT 10.4.

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.

We note that 10 CFR 20.1906(c) and 10CFR 20.1906 (d) place additional requirements on Type A package quanitiy limits affecting package opening procedures, monitoring required for radioactive contamination on external surfaces of a package, and surface contamination levels requiring notimication of the NRC as follows: Special requirements must be followed for packages containing quantitiesof material in excess of the Type A quanitite limits specified in 10 CFR 71.4 and Appendix A to Part 71. All shipping packages received, known to contain radioactive material, must be monitored for radiation contamination and radiation levels if the package is labeled according to U.S. Department of Transportation rules (i.e., labeled White I, Yellow II, or Yellow III) as containing radioactive material or if there is evidence of damage to the package. Such packages must be monitored for external radiation contamination within 3 hours after receipt if received during working hours, or within 3 hours from the beginning of the next working day if received after working hours in accordance with the requirements of 10 CFR 20.1906. The NRC Regional Office and the final delivery carrier must be notified immediately if removable contamination exceeds the limits of 10 CFR 71.87(i) or the external radiation levels exceed the limits of 10 CFR 71.47.

We also note that Appendix X procedures for receiving and opening packages do not exempt packages containing less than Type A quantities of radioactive material from removable contamination surveys as does 10 CFR 20.205(b) and Appendix L to the Regulatory Guide 10.8.

We have revised our current package opening procedures to reflect the changes in the revised Part 20.

Item 10.8 Unit Dosage Records

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

Item 10.10 Molybdenum Concentration Records

We will establish and implement the model procedure for measuring and recording molybdenum concentration that was published in Appendix M.3 to Regulatory Guide 10.8, Revision 2.

At the present time all of our technicium-99m is supplied by a radiopharmacy. We do not use a generator on site.

Item 10.11 Implant Source Use Records

We will establish and implement the model procedure for keeping an inventory and use record for implant sources that was published in Appendix M.4 to Regulatory Guide 10.8, Revision 2. with the following modification:

1. Cesium implant sources will be stored in a locked safe. Other implant sources will be stored in a locked storate room.

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 Air Concentration Control

Item 10.13.1 WORKER DOSE FROM NOBLE GASES

We will collect spent noble gas in a shielded container and will establish and implement the model procedure for checking trap effluent that was published in Appendix O.3.

Item 10.13.2 WORKER DOSE FROM AEROSOLS

We will collect spent aerosol in a shielded **single use trap.** It is understood that the trap effluent of single-use devices does not have to be monitored.

Item 10.13.3 PUBLIC DOSE FROM AIRBORNE EFFLUENT

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 CLEARANCE TIME

We will calculate spilled gas clearance times according to the procedure that was published in Appendix O.4 to Regulatory Guide 10.8, Revision 2.

Item 10.14 Radiopharmaceutical Therapy

We will establish and implement the model procedure for radiation safety during radiopharmaceutical therapy that was published in appendix P to Regulatory Guide 10.8, Revision 2, with the following modifications:

Model Procedure Item 8 : During radiopharmaceutical therapy we restrict visitor access as appropriate.. This is explained to the patient by the physician. If there are to be visitors, we generally meet with them beforehand and explain the need for limiting time and maximizing their distance from the patient. We indicate an area sufficiently far from the patient (> 6 feet) where we encourage them to remain. Visiting times for the first two days are limited to 30 minutes/day. Nurses are instructed to remind the visitors of the restrictions.

Item 10.15 Implant Therapy

We will establish and implement the model procedure for radiation safety during implant therapy that was published in Appendix Q to Regulatory Guide 10.8, Revision 2. with the following modification:

Model Procedure Item 6: During implant therapy we generally do not allow visitors. This is explained to the patient and the immediate family by the physician. If there are to be visitors we try to meet with them and explain the need for limiting time and maximizing their distance from the patient. We indicate an area sufficiently far (> 6 feet) from the patient where we encourage them to sit, allowing brief excursions to bedside. Visiting times limited to 30 minutes/day. Exposure rates are measured in the visitor designated area as part of our area survey. Nurses are also instructed to remind the visitors of the restrictions.

We note the new posting requirements of 10 CFR 20.1903 (b)

> When patients have received therapeutic administrations of radionuclides or therapeutic applications of sealed sources, the criteria for exceptions to posting requirements specified in 10 CFR 20.1903 will likely be exceeded. Dose rates from therapy patients can often exceed 5 mrem per hour at 1 meter from the patient. Under these conditions, the entrance of the patient's room must be posted and access to the area controlled. In our situation access is controlled by routine surveillancy by nursing personnel and by posting instructions for hosptial personnel and visitors at the entrance to the patient room.

ATT 10.4 RULES FOR SAFE USE OF RADIOPHARMACEUTICALS

1. Individuals routinely working with radioactive material will wear laboratory coats or other protective clothing. Others may be required to wear such protective clothing if deemed necessary by the Radiation Safety Officer.

2. Wear disposable gloves at all times while handling radioactive materials.

3. Monitor hands and clothing for contamination at the end of each day or if contamination is suspected.

4. Use syringe/vial shields when eluting the generator or preparing kit material. Syringe shields should be used when administering radioactive material to a patient unless the use of the shield would compromise the patient's well being.

5. a. Do not eat, drink, smoke, or apply cosmetics in any area where radioactive material is stored or used.

   b. Do not store food, drink, or personal effects with radioactive material.

6. a. Assay each patient dose in the dose calibrator prior to administration. Do not use any doses that differ from the prescribed dose by more than 10 percent, except for prescribed doses less than 10 microcuries. For pure beta emitters, the vendor assay will be used; however, it is prudent to check the dose with the dose calibrator using previously determined settings as a precaution. Check the patient's name and identification number and the prescribed radionuclide, chemical form and dosage before administering..

   b. For therapeutic doses and all I-131 doses greater than 30 uCi, check the patient's name, the radionuclide, the chemical form, and the activity vs. the order written by the physician who will perform the procedure. Do not use any dose that differs from the prescribed dose by more than 10%. Insure that the QMP form is complete.

7. Wear personnel monitoring devices (film badge or TLD) at all times while in areas where radioactive materials are used or stored, if you are likely to receive 10% of the legal limits.

8. Wear TLD finger badges during elution of generator, preparation, and assay of radiopharmaceuticals.

9. Dispose of radioactive waste only in specially designed and properly shielded receptacles.

10. Never pipette by mouth.

11. Survey generator, kit preparation, and injection areas for contamination at the end of the day or if contamination is thought to exist.

12. Confine radioactive solutions in shielded containers that are clearly labeled. Radiopharmaceutical multidose diagnostic vials and therapy vials should be labeled with the isotope, the name of the compound, and the date and time of receipt or preparation. A logbook or computer should be used to record the preceding information as appropriate and total prepared activity, specific activity as mCi/cc at a specified time, total volume prepared, total volume remaining, the measured activity of each patient dosage, and any other appropriate information. Syringes and unit doses should be labeled with the radiopharmaceutical name or abbreviation.

13. Always transport radioactive material in shielded containers.

14. Wipe-test byproduct material storage, preparation, and administration areas weekly for contamination. If necessary decontaminate or secure the area for decay.

15. With a radiation detection survey meter, survey the generator storage, kit preparation, and injection areas daily for contamination. If necessary, decontaminate or secure the area for decay as appropriate.

16. Always keep unused flood sources, syringes, waste and other radioactive material in shielded containers.

ITEM 11 **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.

APR 0 2 1997

William Senneff
Assistant Administrator
Lester E. Cox Medical Center
1423 N. Jefferson
Springfield, MO 65802

Dear Mr. Senneff:

Enclosed is Amendment No. 45 renewing your NRC Material License No. 24-01143-06 in accordance with your request.

Please be advised that your former Licensed Conditions No. 17 and 18 have been deleted from your license. License Condition No. 17, regarding authorization for possession, use and transfer of depleted uranium contained as shielding material in molybdenium-99/technetium-99m generators, was deleted because you did not request this authorization in your renewal application. License Condition No. 18, regarding requirements to assay all patient doses prior to administration and to not use doses which differ from the prescribed dose by more than 10 percent, was deleted because you already made those commitments to the NRC in Item No. 6 of Attachment No. 10.4 to your application dated March 24, 1995.

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region III office so that we can provide appropriate corrections and answers.

Please be advised that your license expires at the end of the day, in the month, and year stated in the license. Unless your license has been terminated, you must conduct your program involving byproduct materials in accordance with the conditions of your NRC license, representations made in your license application, and NRC regulations. In particular, note that you must:

1. Operate in accordance with NRC regulations 10 CFR Part 19, "Notices, Instructions and Reports to Workers; Inspections," 10 CFR Part 20, "Standards for Protection Against Radiation," and other applicable regulations.

2. Not possess and use materials authorized in Items 6, 7, and 8, on the license until:

   a. You have constructed the facilities and obtained the equipment described in the license application and supporting documentation; and

b. You have notified the U. S. Nuclear Regulatory Commission, Region III, ATTN: Chief, Nuclear Materials Safety Branch, in writing, that activities authorized by the license will be initiated.

3. Notify NRC, in writing, within 30 days:

a. When an authorized user or Radiation Safety Officer permanently discontinues performance of duties under the license or has a name change; or

b. When the licensee's mailing address changes (no fee is required if the location of byproduct material remains the same).

4. In accordance with 10 CFR 30.36(b) and/or license condition, notify NRC, promptly, in writing, and request termination of the license:

a. When you decide to terminate all activities involving materials authorized under the license; or

b. If you decide not to complete the facility, acquire equipment, or possess and use authorized material.

5. Request and obtain a license amendment before you:

a. Receive or use byproduct material for a clinical procedure permitted under Part 35 but not permitted by your license issued pursuant to this Part;

b. Permit anyone, except a visiting authorized user described in 10 CFR 35.27, to work as an authorized user under the license;

c. Change Radiation Safety Officers;

d. Order byproduct material in excess of the amount, or radionuclide, or form different than authorized on the license;

e. Add or change the areas of use or address or addresses of use identified in the license application or on the license; or

f. Change ownership of your organization.

6. Submit a complete renewal application with proper fee or termination request at least 30 days before the expiration date of your license. You will receive a reminder notice approximately 90 days before the expiration date. Possession of

byproduct material after your license expires is a violation of NRC regulations. A license will not normally be renewed, except on a case-by-case basis, in instances where licensed material has never been possessed or used.

In addition, please note that NRC Form 313 requires the applicant, by his/her signature, to verify that the applicant understands that all statements contained in the application are true and correct to the best of the applicant's knowledge. The signatory for the application should be the licensee or certifying official rather than a consultant.

You will be periodically inspected by NRC. Failure to conduct your program in accordance with NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC will result in enforcement action against you. This could include issuance of a notice of violation, or imposition of a civil penalty, or an order suspending, modifying or revoking your license as specified in the General Policy and Procedures for NRC Enforcement Actions, 10 CFR Part 2, Appendix C. Since serious consequences to employees and the public can result from failure to comply with NRC requirements, prompt and vigorous enforcement action will be taken when dealing with licensees who do not achieve the necessary meticulous attention to detail and the high standard of compliance which NRC expects of its licensees.

Sincerely,

Original Signed By
Charles F. Gill
Nuclear Materials Licensing Branch

License No. 24-01143-06
Docket No. 030-09784

Enclosure: Amendment No. 45

DOCUMENT NAME: M:\03009784.CL7
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DATE	03/31 /97								

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COX RADIATION CENTERS

COX MEDICAL CENTER NORTH
1423 NORTH JEFFERSON AVENUE
SPRINGFIELD, MISSOURI 65802
417/836-3436

COX MEDICAL CENTER SOUTH
3801 SOUTH NATIONAL AVENUE
SPRINGFIELD, MISSOURI 65807
417/885-6115

September 28, 1995

US Nuclear Regulatory Commission, Region III
Materials Licensing Section
901 Warrenville Road
Lisle, Illinois 60532-4361

Attn: Charles Gill

Re: License # 24-01143-06 Control # 398340
Addition of Drs John A Sullivan and John Bartlett to license

Dear Mr Gill:

Previously, we had requested that Dr. John Bartlett and Cr. John Sullivan be be added to our license on the basis of board certification and experience. They were disqualified because of the recentness of training rule. The earlier reviewer requested documentation of additional training.

Both of these physicians have been at our institution for a number of years. Dr. Bartlett was board certified in 1974 and has been part of our diagnostic group since 1976. Dr. Sullivan was board certified in 1984 and has been part of our diagnostic group since 1984. Although these individuals have been practicing Nuclear Medicine since they arrived, they were not added to our license because of administrative oversights.

Both of these physicians rotate through the Nuclear Medicine department on a periodic basis. In order to comply with the reviewer's request and the requirements of 10 CFR 35, they have been working under my supervision. Their work has been peer reviewed in accordance with the guidelines established by the JCAHO.

Both of these physicians have attended formal diagnostic review courses in which diagnostic nuclear medicine has been incorporated as part of the curriculum. These were one week sessions of approximately 32 CEU of which approximately 20-25 percent of the time was dedicated to diagnostic Nuclear Medicine.

Dr. Bartlett:

10/17/94 19th Annual San Diego Post Graduate Radiology Course

10/25/93 18th Annual San Diego Post Graduate Radiology Course

03/21/94 37th Annual San Francisco Radiology PostGraduate

10/26/92 17th Annual San Diego Post Graduate Radiology Course

Dr. Sullivan:

7/18/94 Imaging 1994, Santa Fe, NM

7/26/93 UCSF Update in Radiology

11/30/93 RSNA, Chicago -- Sessions in Nuclear Medicine

We hope that this provides you with enough information to continue your review.

Sincerely,

James R Wolski, MD

James R. Wolski, M.D.
Director, Nuclear Medicine
Chairman, Radiation Safety Committee

William J. Nalesnik, Ph.D.
Radiation Safety Officer

William P. Senneff
Administration

The American Board of Radiology

Organized through the cooperation of the
American College of Radiology, the American Roentgen Ray Society,
the American Radium Society, the Radiological Society of North America,
the Section on Radiology of the American Medical Association,
the American Society for Therapeutic Radiology and Oncology, the Association of
University Radiologists, and American Association of Physicists in Medicine
Hereby certifies that

Bruce Llewellyn Hedgepeth

Has pursued an accepted course of graduate study
and clinical work, has met certain standards and qualifications and
has passed the examinations conducted under the authority of
The American Board of Radiology

On this ninth day of June, 1994

Thereby demonstrating to the satisfaction of the Board
that he is qualified to practice the specialty of

Diagnostic Radiology

THE AMERICAN BOARD OF RADIOLOGY
INCORPORATED IN THE DISTRICT OF COLUMBIA
1934

AMERICAN BOARD OF MEDICAL SPECIALTIES
EXCELLENCE
APPROVED

Lea F. Rogers M.D. President
Lester J. Peters Secretary-Treasurer
M. Paul Capp M.D. Executive Director

The American Board of Radiology

Organized through the cooperation of the
American College of Radiology, the American Roentgen Ray Society,
the American Radium Society, the Radiological Society of North America,
the Section on Radiology of the American Medical Association,
the American Society for Therapeutic Radiology and Oncology, the Association of
University Radiologists, and American Association of Physicists in Medicine
Hereby certifies that

Bryan Keith Hall

Has pursued an accepted course of graduate study
and clinical work, has met certain standards and qualifications and
has passed the examinations conducted under the authority of
The American Board of Radiology

On this ninth day of June, 1994

Thereby demonstrating to the satisfaction of the Board
that he is qualified to practice the specialty of

Diagnostic Radiology

THE AMERICAN BOARD OF RADIOLOGY
INCORPORATED IN THE DISTRICT OF COLUMBIA
1934

AMERICAN BOARD OF MEDICAL SPECIALTIES

Lee F. Rogers M.D. President
Lester J. Peters Secretary-Treasurer
M. Paul Capp M.D. Executive Director

April 3, 1995

Lester E. Cox Medical Center
ATTN: William J. Nalesnik, Ph.D.
Radiation Safety Officer
1423 N. Jefferson
Springfield, MO 65802

SUBJECT: LICENSE RENEWAL APPLICATION

Dear Dr. Nalesnik:

This is to acknowledge receipt of your application for renewal of the 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 and your license number.

Sincerely,

Original Signed By
Marianne Meenan, Chief
Nuclear Materials Support Section

License No.: 24-01143-06
Control No.: 398340

DOCUMENT NAME: M:\03009784.DT5
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NAME	MMEENAN:jaw								
DATE	04/3/95								

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