



MAC NEAL MEMORIAL HOSPITAL

3249 S. Oak Park Avenue • Berwyn, Illinois 60402 • A/C 312-795-9100

Department of Nuclear Medicine
Sharad P. Mehta, M. D.
Medical Director

23 March 1979

John Cooper, Ph.D.
Regional Licensing Branch
United States Nuclear Regulatory
Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Dr. Cooper:

Enclosed is our application for the renewal of our
By-product Materials License 12-09155-01.

Also included is our check for the renewal fee of
\$190.00.

We have not included any information on Xenon-133
since we just recently received our amendment. No changes
have been made and all information is contained in the
amendment application.

We appreciate your cooperation, and should you have any
questions, please do not hesitate to contact me.

Very truly yours,

Sharad Mehta
Sharad Mehta, M.D.
Director

SM/rjm
Encl.

Applicant	49048
Check No.	190 (78)
Amount/Fee Category	Renewal
Type of Fee	Renewal
Date Check Rec'd	APR 9 1979
Received By	Brown

RECEIVED BY LFMB	
Date	APR 9 1979
Log	Apr 6 1979
By	Brown
Orig. To	
Action Compl.	4/14/79

8507120646 850614
REG3 LIC30
12-09155-01 PDR

APR 2 1979

Control No. 01540

CALIBRATION OF DOSE CALIBRATOR

A. Sources Used for Linearity Test:

Check as appropriate

 First elution from new Mo-99/Tc-99m generator

or

 X other* (specify) Tc^{99m} Calibrated Standard

B. Sources Used for Instrument Accuracy and Tests:

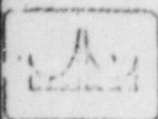
Radionuclide	Activity (mCi)	Accuracy
57 Co	<u> </u>	+ - 5%
133 Ba	.200	+ - 5%
137 Cs	1	+ - 5%
other	<u> </u>	<u> </u>

C. X The procedures described in Appendix D
Section 2 will be used for calibration of
the dose calibrator.

or

 2 Equivalent procedures are attached.

* Must be equivalent to the highest activity used.



MacNeal Memorial Hospital

324 S. OAK PARK AVENUE • BERNHYN, ILLINOIS 60307, A.C. 312-797-3000

DEPARTMENT OF NUCLEAR MEDICINE

Co-Directors:

MARION F. PAGALOTTI, M.D., F.A.C.R.

ROBERT J. BECKER, M.D.

- A. Ventilated Hood-Lined with Lead Bricks.
Storage for radionuclides except biologicals.
- B. Refrigerator with lead brick cover for biologicals.
- C. Rack Calibrator
- D. T-3, T-4 procedures
- E. Thyroid uptake
- F. Door with special lock.
- G. Sink
- H. Dressing Room
- I. Dose measurement
Shield-absorbent
plastic paper base.
- J. Film badge rack
- K. Door with lock
- L. SPECIAL waste
disposal can,
with cover.
- M. Receptionist



DIAGRAM-DEPARTMENT OF NUCLEAR MEDICINE-MACNEAL MEMORIAL HOSPITAL

INSTRUMENTATION

1. Survey meters

a. Manufacturer's name: Victoreen Survey Meter
Manufacturer's model number: Cutie Pie - 7400
Number of instruments available: 1

Minimum range: _____ mr/hr to _____ mr/hr
Maximum range: _____ mr/hr to _____ mr/hr

b. Manufacturer's name: Electro-Neutronics, Inc.
Manufacturer's model number: G.M. Serial 100646
Number of instruments available: 1
ranges: _____

Minimum range: _____ mr/hr to _____ mr/hr
Maximum range: _____ mr/hr to _____ mr/hr

2. Dose calibrator

Manufacturer's name: Radx Dosecalibrator
Manufacturer's model number: Digital model
Number of instruments available: 1

Hospital Mac Neal Hospital NRC License NO. 12-09155-01
Date _____

MEDICAL ISOTOPES COMMITTEE

1. NAME Marion F. Magalotti, M.D. DUTY RSO
Medical Specialty Radiologist
2. NAME Myron Green, M.D.
Medical Specialty Radiologist
3. NAME Dean Farley, M.D.
Medical Specialty OB-Gyn
4. NAME Sharad Mehta, M.D.
Medical Specialty ~~Radiologist~~ Nuclear Medicine Physician
5. NAME Gabriel Pulido, M.D.
Medical Specialty Pathologist
6. NAME Dorothy Lenar
Medical Specialty ~~Registered Nurse~~
7. NAME Robert MacNerland, M.D.
Medical Specialty OB-Gyn
8. NAME _____
Medical Specialty _____
9. NAME _____
Medical Specialty _____
10. NAME _____
Medical Specialty _____

3. Diagnostic instruments

<u>Type of Instrument</u>	<u>Manufacturer's Name</u>	<u>Model No.</u>
Gamma .Camera	Searle	LFOV
Gamma Camera	Searle	Mobile (Scintiview & Scintistore)

4. Other

Ohio-Nuclear Dual scanning probe

~~Pickering Scaler & Thyroid Probe~~ Picker Single Probe Scanner

~~Pickering Scaler and Well~~ G.E. Scaler, Thyroid Probe & Well Detector

Picker Hemolitre

Squibb Q.C. Analyzer

Radax Dose Calibrator

Radax Meletron Melecord

CALIBRATION OF SURVEY INSTRUMENTS

Check appropriate items

- X 1. Survey instruments will be calibrated at least annually and following repair.
- X 2. Calibration will be performed at two points on each scale. The two points will be approximately $1/3$ and $2/3$ of full scale. A survey instrument may be considered properly calibrated when the instrument readings are within $\pm 10\%$ of the calculated or known values for each point checked. Readings within $\pm 20\%$ are considered acceptable if a calibration chart or graph is prepared and attached to the instrument.
- X 3. Survey instruments will be calibrated
- _____ a. By the manufacturer
- _____ b. At the licensee's facility
- (i) Calibration source
- Manufacturer's name _____
- Model no. _____
- Activity in millicuries _____
- Accuracy _____
- Traceability to primary standard _____
- (ii) The calibration procedures in Appendix D, Section I will be used.
- or
- (iii) The step-by-step procedures, including radiation safety procedures are attached.
- X c. By a consultant or outside firm
- (i) Name: Instrument Calibration Center
- (ii) Location: 5213 West Lawrence Avenue
Chicago, Illinois
- (iii) Procedures and sources
- X have been approved by NRC and are on file in License No. 12-14821-01
- _____ are attached

Hospital _____ NRC License NO. _____

Date _____

PERSONNEL TRAINING PROGRAM AND FREQUENCY

All personnel who will be involved in the receipt, handling, use or disposal of radionuclides will be instructed in all or parts of the following subjects:

- a. Areas where radioactive material is used or stored.
- b. Potential hazards associated with radioactive material.
- c. Radiological safety procedures appropriate to their respective duties.
- d. Pertinent NRC regulations.
- e. The rules and regulations of the licensee.
- f. The pertinent terms of the license.
- g. Their obligation to report unsafe conditions.
- h. Appropriate response to emergencies or unsafe conditions.
- i. Their right to be informed of their radiation exposure and bioassay results.

Training will be such that clerical, nursing, housekeeping and security personnel will have lectures to their understanding.

The time involved for the lectures on the listed topics will total approximately eight hours.

Personnel will also be instructed on the above topics during:

- a. Annual refresher course.
- b. Before assuming their duties in the vicinity of radioactive material.
- c. Whenever a significant change in duties, regulations or conditions of the license occurs.

Hospital _____ NRC License NO. _____
Date _____

PROCEDURES FOR SEALED CALIBRATION & REFERENCE SOURCES

1. All sealed calibration or reference sources will be kept in the proper storage area and shielded with lead.
2. The sources when required will be wipe/leak tested by a licensed consultant and records kept.
3. The sources will be used only for their intended purpose, either reference or calibration.