

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License number

20-00275-08

Docket or Reference number

030-01807

Amendment No. 36

Boston City Hospital
Department of Radiology and Radiation Physics
818 Harrison Avenue
Boston, Massachusetts 02118

In accordance with letter dated February 21, 1984, License Number 20-00275-08 is amended as follows:

Condition 12. is amended to read:

12. Licensed material listed in Item 6. above is authorized for use by, or under the supervision of, the following individual(s) for the materials and uses indicated:

Robert Levin, M.D.

Groups I, II, III, IV, and V

Victor Lee, M.D.

All except Group VI

Merrill Feldman, M.D.

Group VI

Christopher Longcope, M.D.

Group I

Iodine 131 for thyroid imaging, treatment of hyperthyroidism and cardiac dysfunction, Hydrogen 3, Carbon 14, Sulfur 35 for research studies in humans

Steven Gross, M.D.

Iodine 125 as a sealed source in a device for bone mineral analysis

Bruce Leiter, M.D.

Groups I, II and III

For the U.S. Nuclear Regulatory Commission

Ordering form

By Nuclear Materials and Safeguards Branch
Region I
King of Prussia, Pennsylvania 19406

8512190036 851118
REG1 LIC30
20-16392-01 PDR

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 used for radiation protection purposes, i.e., at least up to 1 R/hr.

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 ± 10 percent of the calculated or known values for each point checked. Readings within ± 20 percent are considered acceptable if a calibration chart, graph, or response factor is prepared, attached to the instrument, and used to interpret readings to within ± 10 percent. Also, when higher scales are not checked or calibrated, an appropriate precautionary note will be posted on the instrument.

3. Survey instruments will be calibrated
- _____ a. By the manufacturer
- _____ b. At the licensee's facility

(1) Calibration source

Manufacturer's name

Model no. _____

Activity in millicuries

or

Exposure rate at a specified distance
Accuracy

Accuracy

Traceability to primary standard

- _____
- _____
- X
- (2) The calibration procedures in Section I of Appendix D will be used
or
- (3) The step-by-step procedures, including radiation safety procedures, are attached.
- c. By a consultant or outside firm

(1) Name Nuclear Instrument Company

(2) Location 65 Grove Street, Rockland, Massachusetts

(3) Procedures and sources

X have been approved by NRC and are on file in License No. 20-16972-01

_____ have been approved by an Agreement State; a copy of the Agreement State license, the procedures, and a description of the sources are attached, and the consultant's report will contain the information on

 X the attached "Certificate of Instrument Calibration."
 the consultant's reporting form as attached.

the consultant's reporting form as attached.

_____ are described in the attachment, and the consultant's report will contain the information on _____ the attached "Costs".

_____ the attached "Certificate of Instrument Calibration."
_____ the consultant's reporting form as attached.

the consultant's reporting form as attached.



NUCLEAR INSTRUMENT CO.

Reg. No. 6401-2

Calibration Certificate

Customer Hosp.

Probe Type End Window

Instrument Model E-120

Serial No. _____

Serial No. 10420

Calibration Date 12-17-84

Calibration source(s)	Radium 226 <input checked="" type="checkbox"/> A	Radium 226 <input type="checkbox"/> B	Radium 226 <input type="checkbox"/> C	Cesium 137 <input type="checkbox"/> D	Cesium 137 <input type="checkbox"/> E
Quantity	25.02 mg.	4.98 mg.	1.03 mg.	130 curies	100 mCi.
Mfgs. No.	11880	1582	1-738	Model 69	28-5
NBS Traceable No.	TPX 33822	11005	11005	C-396	30214
Date	8-20-70	11-5-75	9-22-77	9-14-68	10-8-79

Calculated Exposure Rate	Meter Reading	Range Maximum	Calibration Source(s)
<u>40</u>	<u>40</u>	<u>50</u> MR/hr	<input checked="" type="checkbox"/> E
<u>25</u>	<u>29</u>	— R/hr	
<u>10</u>	<u>14</u>		
<u>4</u>	<u>4-4.1</u>	<u>5</u> MR/hr	<input checked="" type="checkbox"/> E
<u>2.5</u>	<u>2.5-2.6</u>	— R/hr	
<u>1</u>	<u>1-1.1</u>		
<u>.40</u>	<u>.42-.44</u>	<u>5</u> MR/hr	<input checked="" type="checkbox"/> E
<u>.25</u>	<u>.24-.28</u>	— R/hr	
<u>.10</u>	<u>.09-.14</u>		
_____	_____	_____ MR/hr	<input type="checkbox"/>
_____	_____	_____ R/hr	
_____	_____	_____ MR/hr	<input type="checkbox"/>
_____	_____	_____ R/hr	

Integrate
Calculated Dose

Beta Shield Open ☐ Closed ☒
Detector center axis parallel ☐ perpendicular ☒ to radiation field
Electronic Alignment ☐ Temperature _____ °C Barometric Pressure _____ mm(Hg) Elevation _____
Instrument check source: Scale: _____ Reading: _____

Remarks: _____

This instrument has been calibrated using procedures recommended by the N.R.C.
U.S. Nuclear Regulatory Commission U.S.N.R.C. license No. 20-16972-01

Calibrated by [Signature]

65 Grove Street — P.O. Box 178 — Rockland, MA. 02370 — Tel. Area Code 617 - 878-6878

NUCLEAR / radiation detection products / instrument services / accessories / supplies

BETWEEN: William O. Miller, Chief
License Fee Management Branch
Office of Administration

John E. Glenn, Chief
Nuclear Materials Section B
Division of Engineering and
Technical Programs

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED

Applicant/Licensee: Tobey Hospital
Application Dated: 10/30/85
Control No.: 104591
License No.: 20-16392-01

2. FEE ATTACHED

Amount: \$ 120.00
Check No.: 11884

3. COMMENTS

02120
4/86

Signed Barbara Pilatchek
Date 11/4/85

B. LICENSE FEE MANAGEMENT BRANCH

1. Fee Category and Amount: 7C - \$120
2. Correct Fee Paid. Application may be processed for:
- Amendment ☒
- Renewal
- License

Signed J. Jackson
Date 11/9/85

SECTION COPY™

REMITTANCE ADVICE

DATE	REFERENCE	AMOUNT ○ CREDIT	%	DISCOUNT	BALANCE
0/29/85			\$120.00		

TOBEY HOSPITAL, INC.
WAREHAM, MASSACHUSETTS

TOBEY HOSPITAL, INC. WAREHAM, MASSACHUSETTS		53-2 113
PAY TO THE ORDER OF	DATE	CHECK NUMBER
N R C	10/29/85	11884
		AMOUNT
		\$120.00
FIRST BRISTOL COUNTY NATIONAL BANK WAREHAM, MASS	Wayne S. Woodford AUTHORIZED SIGNATURE Charles J. King TOWN SIGNER	
⑆011302849⑆ 7059 587⑈		