



Saint Luke's Hospital of New Bedford, Inc.

101 PAGE STREET, P.O. BOX H-3003, NEW BEDFORD, MA 02741-3003

508-997-1515

November 20, 1990

Mr. Steven R. Courtemanche
Nuclear Regulatory Commission
Region 1
475 Allendale Road
King of Prussia, PA 19406

RE: Docket No.: 030-01818
License No.: 20-00713-03
Routine Inspection No.: 030-01818/90-001

Dear Mr. Courtemanche:

This letter is in response to your routine inspection which was conducted on September 19, 1990.

- A. I. This item of noncompliance resulted because of a misunderstanding between the Calibration Facility and the Nuclear Medicine Department.
- II. The survey meter was calibrated at two (2) points on each scale, but was calibrated in CPM and not MR/hr. The Calibration Facility was consulted during the inspection and both parties involved now understand and will insure that survey meters are calibrated according to procedures found in Appendix D of Regulatory Guide 10.8.
- III. The date of compliance was the date of inspection because we enlisted the use of another survey meter which was calibrated according to proper procedures.
- B. I. This item of noncompliance occurred when the technologist on call did perform room surveys at the end of patient studies but did not record it.
- II. All Nuclear Medicine technologists have been advised to record all records of surveys.
- III. Date of compliance was date of survey.

Sincerely,

John Bihldorff
President

sam
9102270045 910211
REG1 LIC30
20-00713-03 PDR



NUCLEAR INSTRUMENT CO.

Calibration Certificate

Reg. No. 9999-1

Customer St. Lukes Hosp. Probe Type INTERNAL - G.M.
Instrument Model Ludlum 5 Serial No. _____
Serial No. 10441 Calibration Date 10-26-90

Calibration source(s)	Radium 226 <u>A</u>	Radium 226 <u>B</u>	Radium 226 <u>C</u>	Cesium 137 <u>D</u>	Cesium 137 <u>E</u>
Quantity	25.02 mg	4.98 mg	1.03 mg	130 curies	100 mCi
Mfgt. No.	11880	1582	1-738	Model 69	28-5
NBS Traceable No.	TPX 33622	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>1500</u>	<u>1490</u>	<u>2000</u> MR/hr R/hr	<u>E</u>
<u>1000</u>	<u>1000</u>		
<u>500</u>	<u>490</u>		
<u>150</u>	<u>150</u>	<u>200</u> MR/hr R/hr	<u>E</u>
<u>100</u>	<u>95</u>		
<u>50</u>	<u>51</u>		
<u>15</u>	<u>15</u>	<u>20</u> MR/hr R/hr	<u>E</u>
<u>10</u>	<u>9.8</u>		
<u>5</u>	<u>5.2</u>		
<u>1.5</u>	<u>1.5</u>	<u>2</u> MR/hr R/hr	<u>E</u>
<u>1.0</u>	<u>.98</u>		
<u>.5</u>	<u>.49</u>		
<u>.15</u>	<u>.14 - .17</u>	<u>.2</u> MR/hr R/hr	<u>E</u>
<u>.10</u>	<u>.08 - .11</u>		
<u>.05</u>	<u>.035 - .06</u>		
Integrate			
Calculated Dose			

Beta Shield Open Closed
 Detector center axis parallel perpendicular to radiation field
 Electronic Alignment Temperature _____ Barometric Pressure _____ mm
 Instrument check source: Scale: X10 Reading: 6 mR/hr

Remarks: * Meter readings are background corrected.

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 Carl J. Bonari

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

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

REG. NO. 9677-1NUCLEAR INSTRUMENT CO.
ROCKLAND, MASSACHUSETTS

CALIBRATION CERTIFICATE

Customer St. Lukes Hospital (N.B.) Probe Type Internal G.M.
 Instrument Model Isdlum 5 Serial No. -----
 Serial No. 10441 Calibration Date 8-15-90

Calibration Source: Cobalt 57
 Quantity: 10.23 uCi.
 Mfgs. No: S-CO-22 #1485
 NBS Traceable No. : SPM-4408L-0-7
 Date: 2-1-88
 Activity: 22.7 x 10⁶ DPM

Calibration: Co-57 Source activity = 2,122,450 DPM, Date 8-15-90

Co-57 on surface contact = .48 Mr/hr.
 Correction factor: .01 Mr/hr = 41,150 DPM.

Co-57 @ 1cr. distance from surface = .30 Mr/hr.
 Correction factor: .01 Mr/hr = 70,050 DPM.

Background, unshielded = .02 Mr/hr.

High voltage set at 550 Volts.

Instrument Check Source: Reading = 7 - 7.5 Mr/hr.
 Range X10

Comments: Black dot at bottom of case is the area of greatest sensitivity.
All readings are taken at this point.

Calibrated by: Carl J. Borsari U.S.NRC License No.20-16972-01

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NUCLEAR INSTRUMENT CO.

Reg. No. 9751-1

Calibration Certificate

Customer St. Lukes Hosp. Probe Type HP-270 GM.
 Instrument Model Eber. E-120 Serial No. _____
 Serial No. 10030 Calibration Date 9-28-90

Calibration source(s)	Radium 226 <input checked="" type="checkbox"/> (A)	Radium 226 <input checked="" type="checkbox"/> (B)	Radium 226 <input checked="" type="checkbox"/> (C)	Cesium 137 <input checked="" type="checkbox"/> (D)	Cesium 137 <input checked="" 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	6-20-70	11-5-75	9-22-77	9-14-68	10-8-79

Calculated Exposure Rate	Meter Reading *	Range Maximum	Calibration Source(s)
<u>4.0</u>	<u>3.8</u>		
<u>2.5</u>	<u>2.5</u>	<u>50</u> MR/hr	<input checked="" type="checkbox"/> E
<u>1.0</u>	<u>1.0</u>	<u> </u> R/hr	
<u>4.0</u>	<u>2.8</u>		
<u>2.5</u>	<u>2.5</u>	<u>5</u> MR/hr	<input checked="" type="checkbox"/> E
<u>1.0</u>	<u>.98</u>	<u> </u> R/hr	
<u>.40</u>	<u>.37 - .42</u>		
<u>.25</u>	<u>.23 - .26</u>	<u>.5</u> MR/hr	<input checked="" type="checkbox"/> E
<u>.10</u>	<u>.07 - .12</u>	<u> </u> R/hr	
_____	_____	_____ 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 _____ Barometric Pressure _____ mm
 Instrument check source: Scale: X1 Reading: 2.2 mR/hr - beta shield open.

Remarks: * Meter readings are background corrected.

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Calibrated by Carl J. Bosari

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NUCLEAR INSTRUMENT CO.

1 of 2
Reg. No. 9305-1

Calibration Certificate

Customer St. Lukes Hosp. Probe Type INTERNAL-ION
Instrument Model Vict 470A Serial No. _____
Serial No. 4336 Calibration Date 1-10-90

Calibration source(s)	Radium 226 (A)	Radium 226 (B)	Radium 226 (C)	Cesium 137 (D)	Cesium 137 (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>800</u>	<u>782</u>	<u>1000</u> MR/hr	<input type="checkbox"/> E
<u>500</u>	<u>490</u>	<u> </u> R/hr	
<u>200</u>	<u>199</u>	<u> </u> R/hr	
<u>250</u>	<u>250</u>	<u>300</u> MR/hr	<input type="checkbox"/> E
<u>150</u>	<u>150</u>	<u> </u> R/hr	
<u>50</u>	<u>50</u>	<u> </u> R/hr	
<u>80</u>	<u>80</u>	<u>100</u> MR/hr	<input type="checkbox"/> E
<u>50</u>	<u>50.1</u>	<u> </u> R/hr	
<u>20</u>	<u>20.5</u>	<u> </u> R/hr	
<u>25</u>	<u>25.7</u>	<u>30</u> MR/hr	<input type="checkbox"/> E
<u>15</u>	<u>15.25</u>	<u> </u> R/hr	
<u>5</u>	<u>5.15</u>	<u> </u> R/hr	
<u>8</u>	<u>7.80</u>	<u>10</u> MR/hr	<input type="checkbox"/> E
<u>5</u>	<u>5.38</u>	<u> </u> R/hr	
<u>2</u>	<u>2.16</u>	<u> </u> R/hr	

Integrate
Calculated Dose

Beta Shield Open Closed

Detector center axis parallel perpendicular to radiation field

Electronic Alignment Temperature _____ Barometric Pressure _____ mm

Instrument check source: Scale: _____ Reading: _____

Remarks: _____

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Calibrated by Carl J. Boroni

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NUCLEAR INSTRUMENT CO.

Calibration Certificate

Reg. No. 9305-1

Customer St. Lukes Hosp. Probe Type INTERNAL-ION
Instrument Model Vit 470A Serial No. _____
Serial No. 4336 Calibration Date 1-10-90

Calibration source(s)	Radium 226 [A]	Radium 226 [B]	Radium 226 [C]	Cesium 137 [D]	Cesium 137 [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>2.5</u>	<u>2.68</u>	<u>3</u> MR/hr	<input checked="" type="checkbox"/> E
<u>1.5</u>	<u>1.65</u>	_____ R/hr	<input type="checkbox"/>
<u>.5</u>	<u>.53</u>	_____ MR/hr	<input type="checkbox"/>
_____	_____	_____ R/hr	<input type="checkbox"/>
_____	_____	_____ MR/hr	<input type="checkbox"/>
_____	_____	_____ R/hr	<input type="checkbox"/>
_____	_____	_____ MR/hr	<input type="checkbox"/>
_____	_____	_____ R/hr	<input type="checkbox"/>
_____	_____	_____ MR/hr	<input type="checkbox"/>
_____	_____	_____ R/hr	<input type="checkbox"/>

Integrate
Calculated Dose

80 mR 79 mR 100 mR

Beta Shield Open Closed
 Detector center axis parallel perpendicular to radiation field
 Electronic Alignment Temperature _____ Barometric Pressure _____ mm
 Instrument check source: Scale: 3 Reading: 1.1 mR/hr
 Remarks: * Meter readings are recorded minus background.

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