

ALFRED J. SWYER, M.D.
Diplomate, American Board of Radiology
Diplomate, American Board of Nuclear Medicine



ALFRED J. SWYER, M.D., P.A.
DIAGNOSTIC IMAGING

307 60th Street
West New York, N. J. 07093
854-1200 Appointments
854-3333 Billing and Insurance

May 3, 1985

United States Nuclear Regulatory Commission
REGION 1
631 Park Avenue
King of Prussia, Pennsylvania 19406

Attention: John E. Glenn, Ph. D., Chief
Nuclear Materials Safety Section B
Div. of Radiation Safety and Safeguards

Re: License No. 29 03198-03
Docket No. 030-02468
Control No. 18026

Dear Sir:

In response to your communication dated March 22, 1985 in re the above, please be advised as follows:

Response to
Question 1

We follow Appendix D Procedure of Regulatory Guide 10.8 for dose calibrator. Please refer to attached copies of

- a. Capintec calibration at installation 11/16/82.
- b. Ra 226 standard; 16.7 microcurie; test microcurie quantity constancy every 6 months
- c. Daily constancy with Cesium 137 (250 microcuries on 1975); CO57 (7.15 mCi on 11/1/82) and Barium 133 (260 microcuries on 5/3/79).
- d. Linearity every 3 months
- e. Geometrical variation at installation
- f. A 20 mCi standard Tc99m is used quarterly (highest multidose of Tc99m used).

The sources were omitted in Item No. 10 because we thought they were included under Paragraph 35.14 (d) of 10CFR Part 35, needing no listing.

Response to
Question 2

Radioactive waste is held for decay prior to disposal as nonradioactive waste in a lead wastebasket locked in laboratory separate from imaging room.

Response to
Question 3

Locked lab is only accessed by Nuclear Medicine Technologists (2) and myself. Entry door is posted with Radioactive Caution Sign.

8506120221 850522
REG1 LIC30
29-03198-03 PDR

"OFFICIAL RECORD COPY"

18026

MAY 08 1985

ALFRED J. WYER M.D.

Diplomate, American Board of Radiology
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May 3, 1985

Page -2-

John E. Glenn, Ph.D., Chief Nucl. Mat'ls.

Our physicist teaches radiation protection to all employees involved with radioactive materials at initial employment and annually thereafter on a refresher basis. The training session covers the contents of our NRC license and NRC rules and regulations. It consists of didactic lectures in radiation protection (time, distance, shielding, etc.), also practical demonstration of GM survey meter, etc.

Response to
Question 4

Enclosed is a copy of letter of authorization from Riverside General Hospital, Secaucus, N.J. signed by Helen Kennedy, Administrator, agreeing to admit my patients containing radioactive material.

Response to
Question 5

Iodine 131 will only be received and administered as capsules.

Response to
Question 6

Riverside Hospital, Secaucus, N.J. has applied for an amendment to their current license to list me as an authorized user for Group V at said hospital. The hospital has not received the amendment as yet, however, same will be forwarded to you immediately upon receipt.

Response to
Question 7

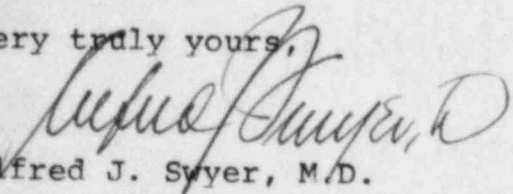
I am adopting your suggestion that I be the day-to-day Radiation Officer.

Response to
Question 8

Please see calibration of Eon G.M. survey meter at 2 points on each scale on attachment # 8.

To the best of my knowledge, the only item remaining unresolved is the pending amendment to Riverside's license which has been explained above.

Very truly yours,


Alfred J. Wyer, M.D.

AJS:lp
Enclosures



A

CAPINTEC INSTRUMENTS, INC.

REPORT OF CALIBRATION

Model CRC-30 Radioisotope Dose Calibrator

serial no. 30075Chamber: Z11247Power Supply Tested OKIometer Tested OKBias Battery Tested OKCalibration

Calibration standards used for Instrument Calibration.

Radionuclide	Activity	Accuracy	Instrument Reading
Co-60	<u>233</u> μ Ci	$\pm 1.8\%$	set*
Co-57	<u>2579</u> μ Ci	$\pm 1.9\%$	set*
Cs-137	<u>0.8306</u> mCi	$\pm 2.3\%$	<u>0.837</u> mCi

* Co-57 and Co-60 standards are used to set the calibration.

LINEARITY TEST (Optional)

Linearity of the chamber is tested by comparing the ratio of chamber outputs for high activity and low activity Tc-99m samples to that from the standard chamber.

✓ < 5% saturation at 2 Ci
 > 5% saturation at 2 Ci

DATE: 11/16/82Bob Scan
Test Engineer

Remarks on back →

THALLIUM 201 12
19 NOV 82 08:20

08:30	5.78 ml	06.9 $\mu\text{C/ml}$
09:45	5.85 ml	06.8 $\mu\text{C/ml}$
11:00	5.91 ml	06.7 $\mu\text{C/ml}$
12:15	5.98 ml	06.6 $\mu\text{C/ml}$
13:30	6.06 ml	06.6 $\mu\text{C/ml}$
14:45	6.13 ml	06.5 $\mu\text{C/ml}$
16:00	6.20 ml	06.4 $\mu\text{C/ml}$
17:15	6.27 ml	06.3 $\mu\text{C/ml}$
18:30	6.35 ml	06.2 $\mu\text{C/ml}$
19:45	6.42 ml	06.2 $\mu\text{C/ml}$
21:00	6.50 ml	06.1 $\mu\text{C/ml}$
22:15	6.58 ml	06.0 $\mu\text{C/ml}$
23:30	6.65 ml	06.0 $\mu\text{C/ml}$
00:45	6.73 ml	05.9 $\mu\text{C/ml}$
02:00	6.81 ml	05.8 $\mu\text{C/ml}$
03:15	6.89 ml	05.8 $\mu\text{C/ml}$
04:30	6.97 ml	05.7 $\mu\text{C/ml}$
05:45	7.06 ml	05.6 $\mu\text{C/ml}$
07:00	7.14 ml	05.5 $\mu\text{C/ml}$
08:15	7.23 ml	05.5 $\mu\text{C/ml}$
09:30	7.31 ml	05.4 $\mu\text{C/ml}$
10:45	7.40 ml	05.4 $\mu\text{C/ml}$
12:00	7.49 ml	05.3 $\mu\text{C/ml}$
13:15	7.57 ml	05.2 $\mu\text{C/ml}$
14:30	7.66 ml	05.2 $\mu\text{C/ml}$
15:45	7.75 ml	05.1 $\mu\text{C/ml}$
17:00	7.85 ml	05.0 $\mu\text{C/ml}$
18:15	7.94 ml	05.0 $\mu\text{C/ml}$
19:30	8.03 ml	04.9 $\mu\text{C/ml}$
20:45	8.13 ml	04.9 $\mu\text{C/ml}$
22:00	8.22 ml	04.8 $\mu\text{C/ml}$
23:15	8.32 ml	04.8 $\mu\text{C/ml}$

**RADIONUCLIDE DOSE COMPUTATION
AND MEASUREMENT RECORD ©**

PATIENT'S
NAME: _____

I.D. _____

STUDIES: _____

NUCLIDE: **THALLIUM 201**

FORM: _____ SAMPLE NO. **12**

LOT NO. _____ KIT NO. _____

DATE: **19 NOV 82 08:19**

CONCENTRATION: **06.9 $\mu\text{C}/\text{ml}$**

DOSE DESIRED: **40.0 μC**

VOLUME REQUIRED: **5.77 ml**

ACTIVITY MEAS'D: **08.3 μC**
STOCK: 1.01 ml

TIME OF
ADMINISTRATION: _____ : _____ AM
PM

SIGNATURE(S): _____



CAPINTEC, INC.

136 SUMMIT AVENUE • MONTVALE, NEW JERSEY 07645
(201) 391-3930 TELEX 138630 (CAPINTEC MTLE)

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1/15/85

Assay the long live standard Ra-226 in the dose calibrator and subtract background level to obtain net activity. Use appropriate setting.

B

Use the same isotope Ra-226 and calibrate with various radionuclide sett

Use Tc-99, I-131, I-123, Xe-133, Ga-67, Tl-201, In-111 etc.

Measured activity is as above.

1/15/85

Radionuclid setting

1/12/83

Activity in μ ci

Ra 226	15	15.7	15.3
Tc-99	79.2	80.85	80.2
I-131	55.1	56.60	56.1
I 123	36	37.50	37.2
Xe-133	47.8	48.38	48.1
Ga-67	70.5	70.86	70.5
Tl 201	44.9	45.80	45.6
In-111	33.2	34.10	34

Y. Hammond, P.S.

Calibration Source Model 184622

Amersham/Searle Ser. 237 Date: 7/1/69

Ra 226 Standardized value: 16.7 μ ci.

RADIONUCLIDE DOSE COMPUTATION
AND MEASUREMENT RECORD

PATIENT'S NAME: Ra 226

I.D. 16.7 μ ci

STUDIES: _____

NUCLIDE: INDIUM 111

FORM: _____ SAMPLE NO. 00

LOT NO. _____ KIT NO. _____

DATE: 12 JAN 83 08:24

CONCENTRATION: 03.3 μ C/ml

DOSE DESIRED: 00.0 μ C

VOLUME REQUIRED: 0.00 ml

ACTIVITY MEAS'D: 33.2 μ C

TIME OF ADMINISTRATION: _____ AM
PM

SIGNATURE(S): _____

ALFRED J. SWYER, M. D., P. A.
DIPLOMATE, AMERICAN BOARD OF RADIOLOGY
307 - 60TH STREET
WEST NEW YORK, N. J. 07093

RADIONUCLIDE DOSE COMPUTATION
AND MEASUREMENT RECORD

PATIENT'S NAME: Ra 226

I.D. 16.7 μ ci

STUDIES: _____

NUCLIDE: GALLIUM 67

FORM: _____ SAMPLE NO. 00

LOT NO. _____ KIT NO. _____

DATE: 12 JAN 83 08:22

CONCENTRATION: 07.0 μ C/ml

DOSE DESIRED: 00.0 μ C

VOLUME REQUIRED: 0.00 ml

ACTIVITY MEAS'D: 70.5 μ C

TIME OF ADMINISTRATION: _____ AM
PM

SIGNATURE(S): _____

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307 - 60TH STREET
WEST NEW YORK, N. J. 07093

RADIONUCLIDE DOSE COMPUTATION
AND MEASUREMENT RECORD

PATIENT'S NAME: Ra 226

I.D. 16.7 μ ci

STUDIES: _____

NUCLIDE: THALLIUM 201

FORM: _____ SAMPLE NO. 00

LOT NO. _____ KIT NO. _____

DATE: 12 JAN 83 08:26

CONCENTRATION: 04.4 μ C/ml

DOSE DESIRED: 00.0 μ C

VOLUME REQUIRED: 0.00 ml

ACTIVITY MEAS'D: 44.9 μ C

TIME OF ADMINISTRATION: _____ AM
PM

SIGNATURE(S): _____

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307 - 60TH STREET
WEST NEW YORK, N. J. 07093

RADIONUCLIDE DOSE COMPUTATION
AND MEASUREMENT RECORD

PATIENT'S NAME: Ra 226

I.D. 16.7 μ ci

STUDIES: _____

NUCLIDE: IODINE 123

FORM: _____ SAMPLE NO. 00

LOT NO. _____ KIT NO. _____

DATE: 12 JAN 83 08:25

CONCENTRATION: 03.6 μ C/ml

DOSE DESIRED: 00.0 μ C

VOLUME REQUIRED: 0.00 ml

ACTIVITY MEAS'D: 36.0 μ C

TIME OF ADMINISTRATION: _____ AM
PM

SIGNATURE(S): _____

ALFRED J. SWYER, M. D., P. A.
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307 - 60TH STREET
WEST NEW YORK, N. J. 07093

RADIONUCLIDE DOSE COMPUTATION
AND MEASUREMENT RECORD

PATIENT'S NAME: Ra 226

I.D. 16.7 μ ci

STUDIES: _____

NUCLIDE: XENON 133

FORM: _____ SAMPLE NO. 00

LOT NO. _____ KIT NO. _____

DATE: 12 JAN 83 08:26

CONCENTRATION: 04.7 μ C/ml

DOSE DESIRED: 00.0 μ C

VOLUME REQUIRED: 0.00 ml

ACTIVITY MEAS'D: 47.8 μ C

TIME OF ADMINISTRATION: _____ AM
PM

SIGNATURE(S): _____

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307 - 60TH STREET
WEST NEW YORK, N. J. 07093

RADIONUCLIDE DOSE COMPUTATION
AND MEASUREMENT RECORD

PATIENT'S NAME: Ra 226

I.D. 16.7 μ ci

STUDIES: _____

NUCLIDE: TECHNETIUM 99M

FORM: _____ SAMPLE NO. 00

LOT NO. _____ KIT NO. _____

DATE: 12 JAN 83 08:23

CONCENTRATION: 07.9 μ C/ml

DOSE DESIRED: 00.0 μ C

VOLUME REQUIRED: 0.00 ml

ACTIVITY MEAS'D: 79.2 μ C

TIME OF ADMINISTRATION: _____ AM
PM

SIGNATURE(S): _____

ALFRED J. SWYER, M. D., P. A.
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307 - 60TH STREET
WEST NEW YORK, N. J. 07093

RADIONUCLIDE DOSE COMPUTATION
AND MEASUREMENT RECORD

PATIENT'S NAME: Ra 226

I.D. 16.7 μ ci

STUDIES: _____

NUCLIDE: IODINE 131

FORM: _____ SAMPLE NO. 00

LOT NO. _____ KIT NO. _____

DATE: 12 JAN 83 08:25

CONCENTRATION: 05.5 μ C/ml

DOSE DESIRED: 00.0 μ C

VOLUME REQUIRED: 0.00 ml

ACTIVITY MEAS'D: 55.1 μ C

TIME OF ADMINISTRATION: _____ AM
PM

SIGNATURE(S): _____

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307 - 60TH STREET
WEST NEW YORK, N. J. 07093

RADIONUCLIDE DOSE COMPUTATION
AND MEASUREMENT RECORD

PATIENT'S NAME: RA 226 STANDARD

I.D. 16.7 μ ci

STUDIES: Dose Calibrator

NUCLIDE: OTHER SELECTED
RA 226

FORM: _____ SAMPLE NO. 00

LOT NO. _____ KIT NO. _____

DATE: 12 JAN 83 08:22

CONCENTRATION: 01.5 μ C/ml

DOSE DESIRED: 00.0 μ C

VOLUME REQUIRED: 0.00 ml

ACTIVITY MEAS'D: 15.0 μ C

TIME OF ADMINISTRATION: _____ AM
PM

SIGNATURE(S): _____

ALFRED J. SWYER, M. D., P. A.
DIPLOMATE, AMERICAN BOARD OF RADIOLOGY
307 - 60TH STREET
WEST NEW YORK, N. J. 07093

DAILY DOSE CALIBRATOR

DATE	^{59}Co (112)	^{133}Ba (591)	^{137}Cs (220)
3-1-85	823 uLi	183 uLi	200 uLi
3-4-85	820 uLi	183 uLi	200 uLi
3-5-85	818 uLi	183 uLi	200 uLi
3-6-85	815 uLi	182 uLi	200 uLi
3-7-85	814 uLi	182 uLi	200 uLi
3-8-85	810 uLi	183 uLi	200 uLi
3-11-85	802 uLi	182 uLi	200 uLi
3-12-85	800 uLi	182 uLi	200 uLi
3-13-85	798 uLi	182 uLi	200 uLi
3-14-85	795 uLi	182 uLi	200 uLi
3-15-85	793 uLi	182 uLi	200 uLi
3-18-85	790 uLi	182 uLi	200 uLi
3-19-85	787 uLi	182 uLi	200 uLi
3-20-85	785 uLi	182 uLi	200 uLi
3-21-85	783 uLi	182 uLi	200 uLi
3-22-85	780 uLi	182 uLi	200 uLi
3-25-85	775 uLi	182 uLi	200 uLi
3-26-85	773 uLi	182 uLi	200 uLi
3-27-85	770 uLi	182 uLi	200 uLi
3-28-85	768 uLi	182 uLi	200 uLi
3-29-85	765 uLi	182 uLi	200 uLi
4-1-85	760 uLi	182 uLi	200 uLi

A.J. Swyer, M.D.

SEALED SOURCELEAK TEST REPORT

1. SOURCE 137 Cs Vial Standard for Dose Calibrator
250 MICROCURIE TRC 1975 CDR 1185

2. INSTRUMENT USED TO
PERFORM LEAK TEST

Gamma Well Counter

3. INSTRUMENT CALIBRATION
SOURCE ACTIVITY IN MICROCURIES

Picker Cs137 Standard 0.118
on 7/1968

4. ACTIVITY OF LEAK TEST SAMPLE

BACKGROUND
COUNTNET ACTIVITY
OF LEAK TEST SAMPLE

COUNTS/MIN. MINUS

COUNTS/MIN. =

COUNTS/MIN.

LEAK TEST RESULTS

Less than 0.0005 MICROCURIESPERFORMED BY J. Warnund, M.S.TITLE Board Certified Radiological Physicist

A. J. Swyer, M.D.

SEALED SOURCELEAK TEST REPORT1. SOURCE 133 - BARIUM Vial Standard for Dose Calibrator

Ser. # 3580579 A - 20 260 uCi on 5/23/79

2. INSTRUMENT USED TO
PERFORM LEAK TEST

Gamma Well Counter

3. INSTRUMENT CALIBRATION
SOURCE ACTIVITY IN MICROCURIESPicker Cs137 Standard 0.118
on 7/1968

4. ACTIVITY OF LEAK TEST SAMPLE

BACKGROUND
COUNT

=

NET ACTIVITY
OF LEAK TEST SAMPLE COUNTS/MIN. MINUS COUNTS/MIN. = COUNTS/MIN.

LEAK TEST RESULTS

Less than 0.0005 MICROCURIESPERFORMED BY J. Warmund, M.S.TITLE Board Certified Radiological Physicist

A.J. Swyer, M.D.

DATE OF REPORT

SEALED SOURCE

LEAK TEST REPORT

1. SOURCE 57 Co 7.150 mCi on 11/1/1982 For Dose Calibrator.

SERIAL # 4535 MA

2. INSTRUMENT USED TO
PERFORM LEAK TEST

Gamma Well Counter

3. INSTRUMENT CALIBRATION
SOURCE ACTIVITY IN MICROCURIES

Picker Cs137 Standard 0.118
on 7/1968

4. ACTIVITY OF LEAK TEST SAMPLE

BACKGROUND
COUNT

- NET ACTIVITY
OF LEAK TEST SAMPLE

_____ COUNTS/MIN. MINUS _____ COUNTS/MIN. = _____ COUNTS/MIN.

LEAK TEST RESULTS

Less than 0.0005 MICROCURIES

PERFORMED BY J. Warmund, M.S.

TITLE Board Certified Radiological Physicist

ALFRED J. SWYER M.D.

Diplomate, American Board of Radiology
Diplomate, American Board of Nuclear Medicine

D

LINEARITY TEST 10/24/84

<u>TIME (HRS)</u>	<u>MEASURED MCI</u>	<u>CALIBRATED MCI</u>
0	20.1 MCI	20 MCI
1	18.2 MCI	17.82 "
2	16 "	15.88 "
3	14.9 "	14.14 "
4	13.12 "	12.6 "
5	11.3 "	11.24 "
6	10.2 "	10 "
7	9.1 "	8.92 "
8	8.1 "	7.94 "
9	7.2 "	7.08 "
24	1.25 "	1.26 "

G. Fernandez D.S.

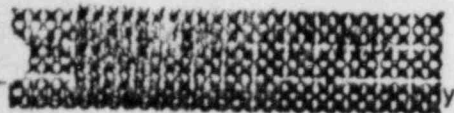
E

THALLIUM 201 12
19 NOV 82 08:20

08:30	5.78 ml	06.9 $\mu\text{C/ml}$
09:45	5.85 ml	06.8 $\mu\text{C/ml}$
11:00	5.91 ml	06.7 $\mu\text{C/ml}$
12:15	5.98 ml	06.6 $\mu\text{C/ml}$
13:30	6.06 ml	06.6 $\mu\text{C/ml}$
14:45	6.13 ml	06.5 $\mu\text{C/ml}$
16:00	6.20 ml	06.4 $\mu\text{C/ml}$
17:15	6.27 ml	06.3 $\mu\text{C/ml}$
18:30	6.35 ml	06.2 $\mu\text{C/ml}$
19:45	6.42 ml	06.2 $\mu\text{C/ml}$
21:00	6.50 ml	06.1 $\mu\text{C/ml}$
22:15	6.58 ml	06.0 $\mu\text{C/ml}$
23:30	6.65 ml	06.0 $\mu\text{C/ml}$
00:45	6.73 ml	05.9 $\mu\text{C/ml}$
02:00	6.81 ml	05.8 $\mu\text{C/ml}$
03:15	6.89 ml	05.8 $\mu\text{C/ml}$
04:30	6.97 ml	05.7 $\mu\text{C/ml}$
05:45	7.06 ml	05.6 $\mu\text{C/ml}$
07:00	7.14 ml	05.5 $\mu\text{C/ml}$
08:15	7.23 ml	05.5 $\mu\text{C/ml}$
09:30	7.31 ml	05.4 $\mu\text{C/ml}$
10:45	7.40 ml	05.4 $\mu\text{C/ml}$
12:00	7.49 ml	05.3 $\mu\text{C/ml}$
13:15	7.57 ml	05.2 $\mu\text{C/ml}$
14:30	7.66 ml	05.2 $\mu\text{C/ml}$
15:45	7.75 ml	05.1 $\mu\text{C/ml}$
17:00	7.85 ml	05.0 $\mu\text{C/ml}$
18:15	7.94 ml	05.0 $\mu\text{C/ml}$
19:30	8.03 ml	04.9 $\mu\text{C/ml}$
20:45	8.13 ml	04.9 $\mu\text{C/ml}$
22:00	8.22 ml	04.8 $\mu\text{C/ml}$
23:15	8.32 ml	04.8 $\mu\text{C/ml}$

ALFRED J. SWYER M.D.

Diplomate, American Board of Radiology
Diplomate, American Board of Nuclear Medicine



F

LINEARITY TEST 10/24/84

<u>TIME (HRS)</u>	<u>MEASURED MCI</u>	<u>CALIBRATED MCI</u>
0	20.1 MCI	20 MCI
1	18.2 MCI	17.82 "
2	16 "	15.88 "
3	14.9 "	14.14 "
4	13.12 "	12.6 "
5	11.3 "	11.24 "
6	10.2 "	10 "
7	9.1 "	8.92 "
8	8.1 "	7.94 "
9	7.2 "	7.08 "
24	1.25 "	1.26 "

Y. Garman D.S.

Riverside General Hospital

April 23, 1985

Alfred Swyer, M.D.
307 60th Street
West New York, New Jersey 07093

Dear Doctor Swyer:

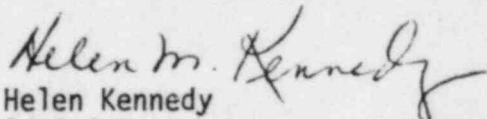
Your request for special privileges to admit patients with radioactivity as outlined in your letter of February 25, 1981, has been reviewed by the Credentials Committee and the Radioisotope Committee of Riverside General Hospital.

The committees concluded that you should be granted assurances that patients of yours who are undergoing radionuclide therapy and require hospitalization would be accepted here with the following provisions:

1. You must notify the Hospital's radiation safety officer prior to the patient's arrival.
2. You must accompany the patient to the Hospital.
3. You must bring with the patient all pertinent medical record information regarding the patient.
4. The patient will only be discharged when the radionuclide activity is 30 millicuries or less.

I was also asked to make it clear that the above explanation in no way alters your current privileges and further the Hospital regulations regarding patients with radioactivity would be applicable to such admissions.

Sincerely yours,


Helen Kennedy
Administrator

HK/my
cc: Radioisotope Committee
Credentials Committee
Physician's File

Hospital of the Meadowlands

Meadowlands Parkway, Secaucus New Jersey 07094, 201-392-3100

JOSEPH WARMUND, M.S.
BOARD CERTIFIED RADIOLOGICAL PHYSICIST
212-30 23rd AVENUE
BAYSIDE, NEW YORK 11360

SURVEY METER, EON G.M.

LOCATION: A. J. SWYER, M.D.

DATE	Standard Source	Calculated mR/hr-	Reading mR/hr	Centimeter Distance	mR/hr Scale	Battery	Correct Factor
4/2/85	CESIUM 137 20.2 mCi	26.14	27	50	50	O.K.	0.97
		6.53	6.8	100	50		0.96
		2.91	3	150	5		0.97
		1.63	1.7	200	5		0.96
		0.26	0.24	500	0.5		1.08
		0.13	0.14	700	0.5		0.93
J. R. Rasmussen 7-1							