

P-6

## FACSIMILE COVER LETTER

DATE: 2/14/05 TIME: 11:55 am

37-00266-03

03002946

NUMBER OF PAGES (including Cover Letter) 6

## TO:

Authorized Receiver's Name:

Penny Lanzetta

Authorized Receiver's Facility:

USNRC~~Name and Address:~~included → Deacy Linearity - Both DC's→ Sleeve Hr. Factors for BothDC's - in 3cc syringe not  
10cc vial

Authorized Receiver's Telephone Number:

→ DC Geometry in 10ccvial on 151-061 unit~~Authorized Receiver's Fax Number:~~(610) 337-5269

## FROM:

Sender's Name:

THE POTTSVILLE HOSPITAL AND WARNE CLINIC  
420 South Jackson Street  
Pottsville, PA 17901

Sender's Telephone Number:

(570) 621-5333

Sender's Fax Number:

(570) 621-5182

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This information is being faxed to you based upon the premise that the information is needed for emergency medical care and the receiving fax machine is in a secured area.

The Pottsville Hospital and Warne Clinic  
Revised: 9/28/98, 6/15/01, 6/04  
C:\P&P\Facsimile cover letter\DRomberger

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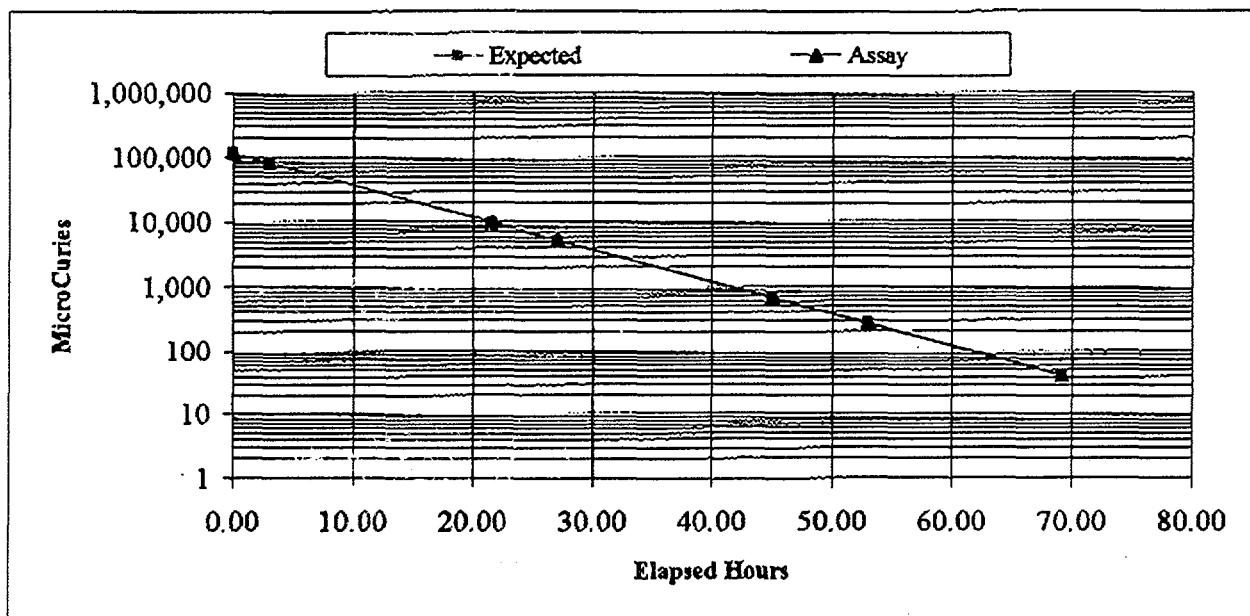
NMSS/RQNI MATERIALS-032

**DOSE CALIBRATOR ACTIVITY LINEARITY TEST**

PERFORMED BY: WALTER L. ROBINSON &amp; ASSOCIATES

Client: Pottsville Hospital & Warne Clinic Date: 2/14/05  
 Dose Calibrator: Capintec CRC-15R Serial Number: 151-061  
 Starting Activity: 118,500  $\mu\text{Ci}$  (Tc-99m) Testing Method: Decay

DATE OF ASSAY	TIME OF ASSAY	HOURS ELAPSED	ASSAY ( $\mu\text{Ci}$ )	EXPECTED ( $\mu\text{Ci}$ )	CORRECT. FACTOR	PERCENT DIFF.
02/07/05	11:00 AM	0.00	118,500	118,500	1.000	0.0%
02/07/05	2:00 PM	3.00	83,900	84,039	1.002	-0.2%
02/08/05	3:35 AM	21.58	9,930	10,004	1.007	-0.7%
02/08/05	2:00 PM	27.00	5,300	5,377	1.015	-1.5%
02/09/05	8:00 AM	45.00	658	684.1	1.040	-4.0%
02/09/05	4:00 PM	53.00	261	273.63	1.048	-4.8%
02/10/05	8:10 AM	69.17	41.2	42.93	1.042	-4.2%

**COMMENTS AND CONCLUSIONS:**

"Hour" factors determined from annual decay.

Test was performed using a 3cc syringe of Tc-99m

Clinical Range from ~100 mCi down to 200  $\mu\text{Ci}$ 

Linearity is within limits - no points were outside 5%.

Reference: ANSI N42.13-1986

(Linearity Check - Annual Decay: ANSI 6.2.1)

"Calibration and Usage of 'Dose Calibrator' Ionization Chambers for the Assay of Radionuclides"

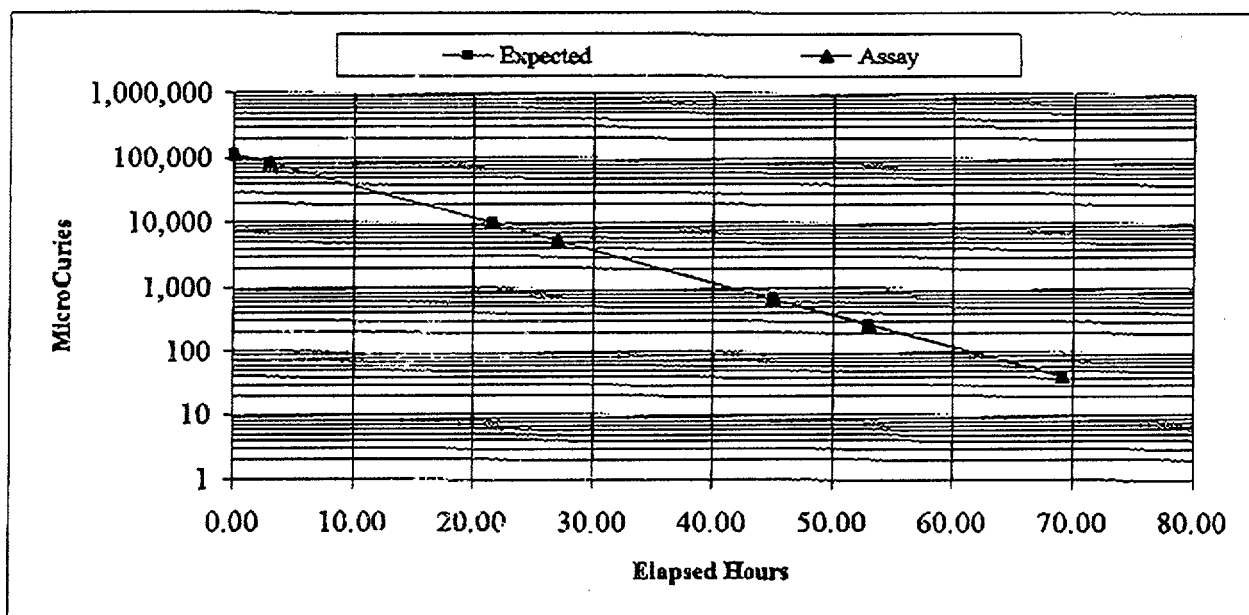
Assayed By: [Signature]Date: 2/10/05Plotted By: [Signature]Date: 2/14/05R.S.O.: [Signature]Date: 2/17/05

**DOSE CALIBRATOR ACTIVITY LINEARITY TEST**

PERFORMED BY: WALTER L. ROBINSON &amp; ASSOCIATES

Client: Pottsville Hospital & Warne Clinic Date: 2/14/05  
 Dose Calibrator: Capintec CRC-15R Serial Number: 152-222  
 Starting Activity: 118,300 uCi (Tc-99m) Testing Method: Decay

DATE OF ASSAY	TIME OF ASSAY	HOURS ELAPSED	ASSAY (uCi)	EXPECTED (uCi)	CORRECT. FACTOR	PERCENT DIFF.
02/07/05	11:00 AM	0.00	118,300	118,300	1.000	0.0%
02/07/05	2:00 PM	3.00	84,500	83,897	0.993	0.7%
02/08/05	8:35 AM	21.58	9,980	9,987	1.001	-0.1%
02/08/05	2:00 PM	27.00	5,350	5,368	1.003	-0.3%
02/09/05	8:00 AM	45.00	662	683.0	1.032	-3.2%
02/09/05	4:00 PM	53.00	264	273.16	1.035	-3.5%
02/10/05	8:10 AM	69.17	41.9	42.86	1.023	-2.3%

**COMMENTS AND CONCLUSIONS:**

"Hour" factors determined from annual decay.

Test was performed using a 3cc syringe of Tc-99m

Clinical Range from ~100 mCi down to 200 uCi

Linearity is within limits - no points were outside 5%.

Reference: ANSI N42.13-1986

(Linearity Check - Annual Decay: ANSI 6.2.1)

"Calibration and Usage of 'Dose Calibrator' Ionization Chambers for the Assay of Radionuclides"

Assayed By: Walter L. RobinsonDate: 2/10/05Plotted By: Jay M. EganDate: 2/14/05R.S.O.: W. L. RobinsonDate: 2/14/05

# WALTER L. ROBINSON AND ASSOCIATES

## CONSULTANT RADIATION PHYSICISTS

CLIENT: Pottsville Hospital & Warne Clinic

### DOSE CALIBRATOR SLEEVE METHOD ACTIVITY LINEARITY CORRECTION FACTOR CALIBRATION

Needed: Decay Linearity Graph for this Dose Calibrator: Capintec CRC-15R

Dose Calibrator S/N: 151-061 Date: 2/14/05

Annual ANSI Hour Factors Evolved for this Sleeve Set, which is: "JAYS"

Sleeve	Run 1 mCi	Run 2 mCi	C.F. # 1	C.F. # 2	Average C.F.
Black	111.7	109.4	1	1	1
Red	68.1	66.7	1.6402	1.6402	1.64
Orange	40.5	39.9	2.7580	2.7419	2.75
Yellow	19.5	19.1	5.7282	5.7277	5.73
Green	4.20	4.12	26.5952	26.5534	26.57
Blue	0.980	0.953	113.980	114.795	114.39
Purple	0.495	0.4830	225.66	226.50	226.08
Mega-Black	0.1576	0.1540	708.76	710.39	709.57
Mega-Red	0.0894	0.0861	1249.4	1270.6	1,260.0
Mega-Orange	0.0543	0.0539	2057.1	2029.7	2,043.4
Mega-Yellow	0.0273	0.0263	4091.6	4159.7	4,125.6
Mega-Green					
Mega-Blue					
Mega-Purple					

Activity  
in 3cc  
Syringe

\*\* Average C.F. above is the "Original C.F." used below.

Sleeve	Original C. F.	Inverted C. F.	Orig Act mCi	Cor. Act mCi	Hours
Black	1	1	118.5	118.5	0
Red	1.64	0.60968	118.5	72.25	4.318
Orange	2.75	0.36364	118.5	43.09	8.830
Yellow	5.73	0.17458	118.5	20.688	15.238
Green	26.57	0.03763	118.5	4.459	28.635
Blue	114.39	0.008742	118.5	1.036	41.375
Purple	226.08	0.004423	118.5	0.5242	47.325
Mega-Black	709.57	0.001409	118.5	0.1670	57.310
Mega-Red	1,260.0	0.000794	118.5	0.0940	62.328
Mega-Orange	2,043.4	0.000489	118.5	0.0580	66.543
Mega-Yellow	4,125.6	0.000242	118.5	0.0287	72.685
Mega-Green					
Mega-Blue					
Mega-Purple					

\*\* The "Original Act." is taken from a current Decay Linearity.

\*\* Inverted C.F. x Original Act. = Corrected Act.: Activity compared to decay for 'Hours'

Decay Run by: [Signature]

Date: 2/7 to 2/10/05

Report By: [Signature]

R.S.O.: [Signature]

# WALTER L. ROBINSON AND ASSOCIATES

## CONSULTANT RADIATION PHYSICISTS

CLIENT: Pottsville Hospital & Warne Clinic

### DOSE CALIBRATOR SLEEVE METHOD ACTIVITY LINEARITY CORRECTION FACTOR CALIBRATION

Needed: Decay Linearity Graph for this Dose Calibrator: Capintec CRC-15R

Dose Calibrator S/N: 152-222 Date: 2/14/05

Annual ANSI Hour Factors Evolved for this Sleeve Set, which is: "JAYS"

Sleeve	Run 1 mCi	Run 2 mCi	C.F. # 1	C.F. # 2	Average C.F.
Black	112.3	109.7	1	1	1
Red	68.4	66.9	1.6418	1.6398	1.64
Orange	40.9	40.3	2.7457	2.7221	2.73
Yellow	19.7	19.2	5.7005	5.7135	5.71
Green	4.23	4.17	26.5485	26.3070	26.43
Blue	0.990	0.968	113.434	113.326	113.38
Purple	0.498	0.4870	225.50	225.26	225.38
Mega-Black	0.1611	0.1557	697.08	704.56	700.82
Mega-Red	0.0905	0.0872	1240.9	1258.0	1,249.5
Mega-Orange	0.0557	0.0540	2016.2	2031.5	2,023.8
Mega-Yellow	0.0274	0.0266	4098.5	4124.1	4,111.3
Mega-Green					
Mega-Blue					
Mega-Purple					

Activity  
in 3cc  
Syringe

\*\* Average C.F. above is the "Original C.F." used below.

Sleeve	Original C. F.	Inverted C. F.	Orig Act mCi	Cor. Act mCi	Hours
Black	1	1	118.3	118.3	0
Red	1.64	0.60946	118.3	72.10	4.320
Orange	2.73	0.36578	118.3	43.27	8.780
Yellow	5.71	0.17522	118.3	20.729	15.205
Green	26.43	0.03784	118.3	4.476	28.590
Blue	113.38	0.00882	118.3	1.043	41.300
Purple	225.38	0.004437	118.3	0.5249	47.300
Mega-Black	700.82	0.001427	118.3	0.1688	57.200
Mega-Red	1,249.5	0.0008	118.3	0.0947	62.250
Mega-Orange	2,023.8	0.000494	118.3	0.0585	66.450
Mega-Yellow	4,111.3	0.000243	118.3	0.0288	72.640
Mega-Green					
Mega-Blue					
Mega-Purple					

\*\* The "Original Act." is taken from a current Decay Linearity.

\*\* Inverted C.F. x Original Act. = Corrected Act.: Activity compared to decay for 'Hours'

Decay Run by: Dennis P. Kellum Date: 2/7 to 2/10/05

Report By: Jay M. Miller

R.S.O.: J. E. Hart

**Walter L. Robinson & Associates**  
**POTTSVILLE HOSPITAL & WARNE CLINIC**  
**Technetium 99m Dose Calibrator Geometry Check**  
**Capintec CRC-15R Serial #151-061 2/7/05**

This check is for a 3 cc Syringe				
Time of Assay	Volume (ml)	Assay (mCi)	Decay-Corrected Assay (mCi)	Geometric Correction Factor
0 Minutes		Original geometry check with 3cc syringe completed 8/93. All points within 5%.  10cc Vial data completed as a supplement to original syringe data.		
1 Minute				
2 Minutes				
3 Minutes				
4 Minutes				
5 Minutes				
6 Minutes				
7 Minutes				
All points were within 5%			Worst Case =	Worst Case =

This check is for a 10 cc Syringe				
Time of Assay	Volume (ml)	Assay (mCi)	Decay-Corrected Assay (mCi)	Geometric Correction Factor
0 Minutes		Original geometry check with 10cc syringe completed 8/93. All points within 5%.  10cc Vial data completed as a supplement to original syringe data.		
1 Minute				
2 Minutes				
3 Minutes				
4 Minutes				
5 Minutes				
6 Minutes				
7 Minutes				
All points were within 5%			Worst Case =	Worst Case =

This check is for a 10 cc Vial				
Time of Assay	Volume (ml)	Assay (mCi)	Decay-Corrected Assay (mCi)	Geometric Correction Factor
0 Minutes	1.0	8.14	8.14	1.0000
1 Minute	2.0	8.12	8.13	0.9989
2 Minutes	4.0	8.13	8.12	1.0016
3 Minutes	6.0	8.14	8.11	1.0042
4 Minutes	8.0	8.13	8.09	1.0044
5 Minutes	10.0	8.12	8.08	1.0046
			Worst Case = 1.0046	
			Worst Case = 0.46%	

Measured By:

*Jay M. Updegraff*  
 Consultant Radiation Physicist

*J. E. Edwards*  
 Radiation Safety Officer