

United States Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137
Attention: D.J. Sreniawski, Chief
Materials Radiation Protection Section 2

Dear Sirs:

This is in response to your letter dated August 9, 1982.

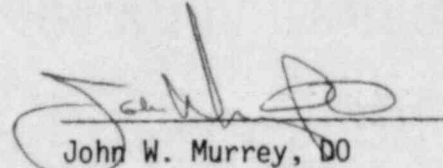
The following action has been taken concerning the listed areas of noncompliance as per your letter and will be addressed numerically in the same order as addressed in your letter:

- i. Concerning the delivery of licensed materials to O'Bleness Memorial Hospital, Hospital Drive, Athens, Ohio. Pharmatopes, Inc. has been instructed that all deliveries to John W. Murrey, DO will be made at 603 West Union Street, Athens, Ohio 45701. To avoid further noncompliance, Pharmatopes was instructed that all couriers be informed that under no circumstances for deliveries to be made to John Murrey, DO be made at any address other than 603 West Union Street and if delivery at this address were not possible, the materials were to be returned to Pharmatopes, Inc. Full compliance was achieved on August 2, 1982.
2. Concerning testing for leakage and or contamination of sealed calibration and reference sources. The sources were inspected and wipe tested by James Matthews, Physicist on August 31, 1982. Copies of results of these tests are enclosed for your inspection. Two steps have been taken to avoid further noncompliance. A Calendar has been established within the Department setting dates in a very visible manner for leakage and or contamination testing to be performed at six months intervals. In addition, we have retained the services of a local Physicist, James Matthews to perform these tests. This should aid in avoiding further noncompliance because of his close proximity and possession of necessary equipment for performance of these tests.
3. Regarding leak test results to be recorded in units of microcuries as stated under #2. Leak and or contamination tests were performed as described above by Dr. Matthews. Results were recorded in microcuries and will continue to be recorded as such. Further noncompliance is to be avoided by utilizing a Physicist in closer proximity to our operation and because Mr. Matthews has equipment that will enable us to keep test results in units of microcuries. In addition, we have asked that during our semi-annual review by our Physicist, that special attention be paid to these areas of noncompliance and that specific written reference be given to these areas in the report of the semi-annual review. Full compliance was achieved on August 31, 1982.
4. Regarding tests of accuracy, linearity, and geometrical variation for the dose calibrator. Accuracy, linearity and geometric variation tests were performed and the results of these tests are enclosed for your inspection. To avoid further noncompliance, dates have been established on the calendar within the Department for performance of instrument accuracy annually and instrument linearity quarterly. In addition, a sticker has been placed on the dose calibrator stating that if this instrument is moved to a new installation, geometric variation test must be performed. In addition, we have also requested that our Physicist at his semi-annual review make detailed inspection of these records and report specifically in his semi-annual review on these areas. Full compliance was achieved on September 7, 1982.

5. Regarding records of transfers of byproduct material. A record keeping system has been established to record all byproduct material transfers to Pharmatopes, Inc. in the form of unused products and waste materials. All persons handling these records have been instructed in how this recording must be performed. In addition, to avoid further noncompliance, we have specifically requested that in our semi-annual reviews specific attention be paid to and written reference be given to review these records. Full compliance was achieved on August 2, 1982.

We sincerely hope that the actions taken will meet with your approval and we welcome any further suggestions as to how we might avoid further noncompliance.

Date 9/9/82


John W. Murrey, DO
License #34-20249-01
603 West Union Street
Athens, Ohio 45701

cad/jm
Enclosures

8/15/82

Geometrical Variation
Correction Factor
2 mCi Tc⁹⁹

1.016

1.008

1.000

.992

2cc

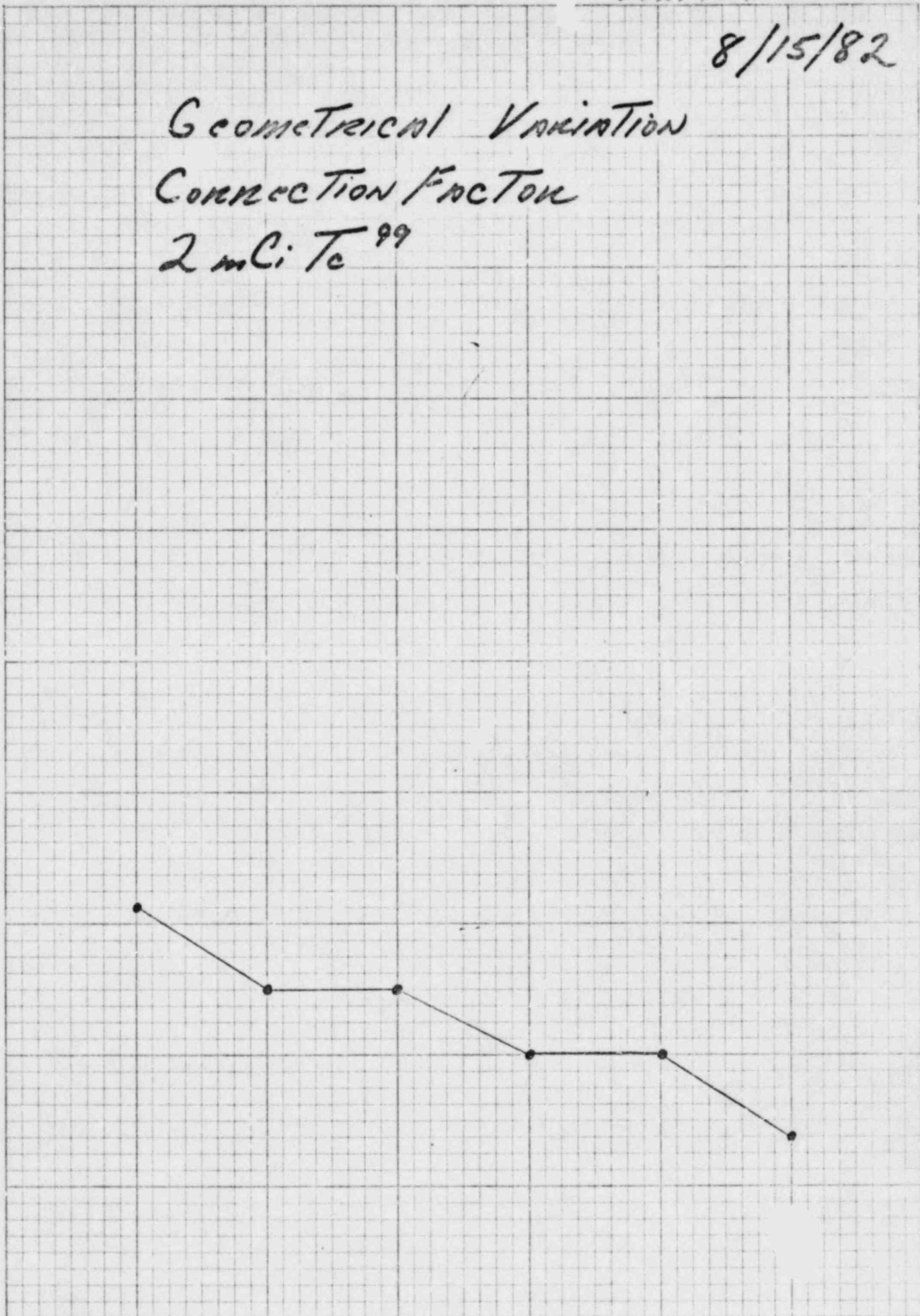
4cc

8cc

10cc

20cc

30cc



QUARTERLY DOSE CALIBRATOR
ACCURACY TEST RECORD

Location: Dr. John Munnely OB/Gyness Hospital
 Ctr: 19 82 Date Test Performed: 9-6-82
 Person Performing Test: Jim Hutton RT NMT
 Dose Calibrator Make: SQUIAB
 Model: CRC 17 Serial: 1705

Type of Measurement		REFERENCE STANDARDS			
		137-Cs- NES-356	57-Co- NES-206	133-Ba- NES-358	Other: _____
Dose Calibrator Calibration Factor		1.0	1.0	1.0	
CALCUL. ACTIVITY	Date Reference Std. Calibrated	6-1-79	7-19-82	6-11-82	
	Strength	198 uCi	5.2 mCi	246 uCi	
	Calibration Source Decay Factor	.932	.878	.980	
	Calculated Activity	184.5	4.56	241.08	
Background					
MEASURED ACTIVITY	Test 1 Net Activity	186.9	4.69	241	
	Test 2 Net Activity				
	Test 3 Net Activity				
	Average Net Measured Activity				
PERCENT DIFFERENCE (Calcul. vs. Meas.) *		1.3%	2.8%	0.03%	

* Difference of $> \pm 5\%$ indicates need for instrument repair or adjustment

Reference: Appendix D, Section 2, NRC Regulatory Guide 10.8

QUARTERLY DOSE CALIBRATOR
LINEARITY TEST RECORD

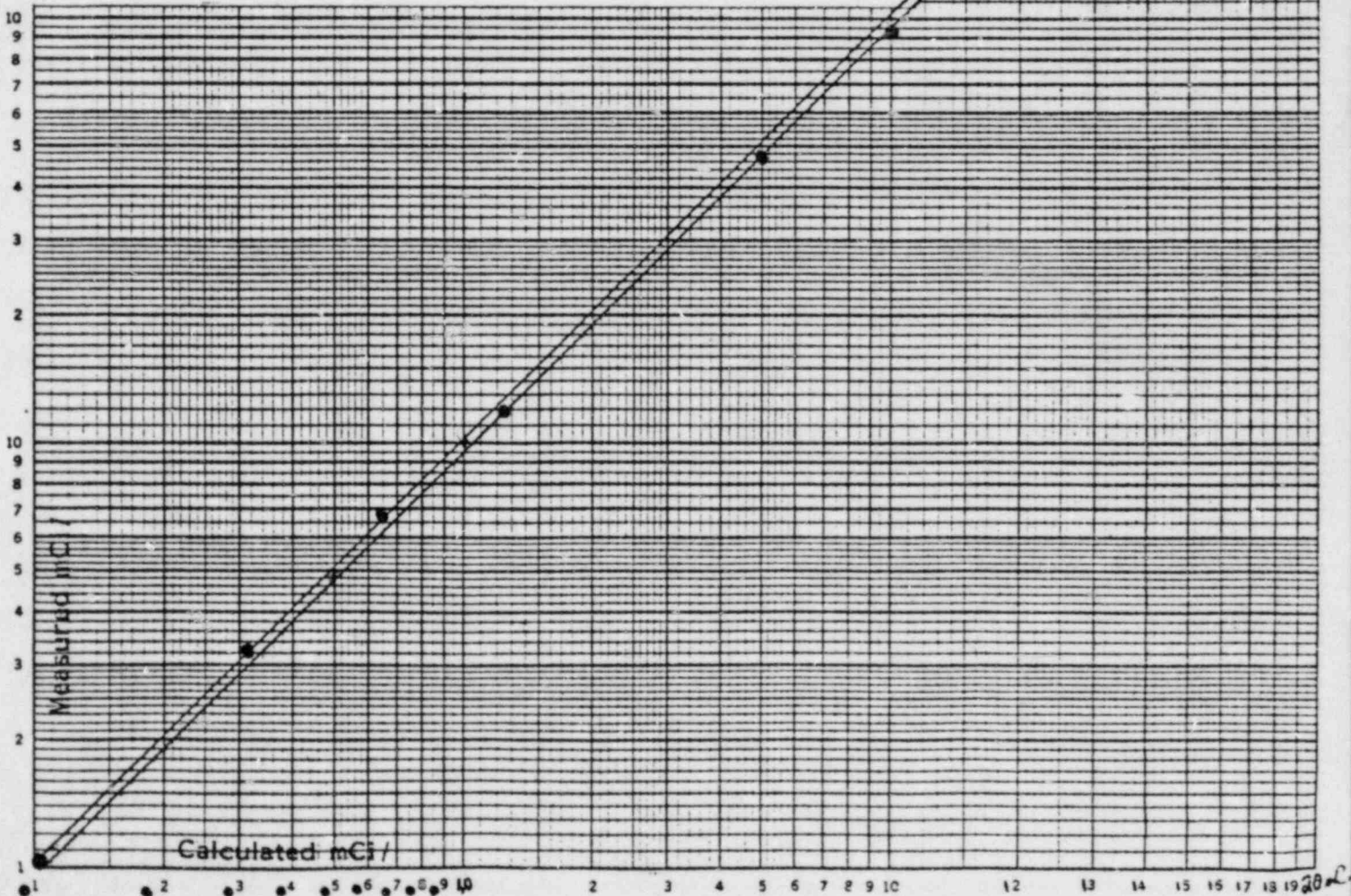
Location: ON/NESS Qtr: _____ 19 82
 Date Test Started: 8-2-82 Person Performing Test: Tom HATTON RT NMT
 Dose Calibrator Make: SQUIBA CRC 17
 Model: CRC 17 Serial: 17059

GUIDE FREQ	ACTUAL FREQ		MEAS. NET	CAL. ACTIV.	Act. Dif.	% Error	
Hr	Decay Factor	Time	ACTIV. (b)	(30 hr Meas. Act. X a) (c)	Cal. Act. (b-c) ÷ c (d)		
0	31.633	8:00	31.633	19.7 _{mCi}	20.09 _{mCi}	-0.0194	1.94%
6	15.853	2:00	15.853	9.8 _{mCi}	10.07 _{mCi}	-0.0268	2.68%
24	1.995	8:00	1.995	1.22 _{mCi}	1.27 _{mCi}	-0.0394	3.94%
30	1	2:00	1	.635 _{mCi}			
48	0.126	8:00	0.126	.0802 _{mCi}	.0800	-.0025	.25%

Net Activity = Activity - Bkg.

Comments:

* % Error should be < ± 5. %



RSO-5

BA 133

SEALED SOURCE RECORD

Leak Test Date Isotope 6/1/82 Sn. # 3580682A-35

Date	β - γ c/m	Bkgd. <small>CPM</small>	Date	a c/m	Bkgd.	Date	β - γ c/m	Bkgd.	a c/m	Bkgd.
<u>8/31/82</u>	<u>38</u>	<u>42</u>	<u>Test</u>	<u>Am-241</u>	<u>MATHEWS</u>					

Dept. _____ Name _____ Bldg. _____ Room _____ Isotope BA 133 Amount 2464Ci

RSO-5

Co 57

SEALED SOURCE RECORD

Leak Test Date Isotope 7/19/82 Ser# 206078 2A-20

Date	$\beta\text{-}\gamma$ c/m	Bkgd	Date	α c/m	Bkgd.
8/31/82	44	42	Test: Jim Matthews RSO		

Date	$\beta\text{-}\gamma$ c/m	Bkgd.	Date	α c/m	Bkgd.

Dept. _____ Name _____ Bldg. _____ Room _____ Isotope Co 57 Amount 5.2 mCi

RSO-5

C-60

SEALED SOURCE RECORD

Leak Test Date 5/17/79 Ser. # 3540579A - 3A

Date	$\beta\text{-}\gamma$ c/m	Bkgd. c/m	Date	α c/m	Bkgd.
8/31/82	38	42	Test by Matthews		RSO

Date	$\beta\text{-}\gamma$ c/m	Bkgd.	Date	α c/m	Bkgd.

Dept. _____ Name _____ Bldg. _____ Room _____ Isotope C-60 Amount 524g

RSO-5

CS 137

SEALED SOURCE RECORD

Leak Test

Date Isotope 6/1/79 Su # 3560679A - 51

Date	β - γ c/m	Bkgd. CPM	Date	α c/m	Bkgd.
8/31/82	36	42	8-1-81	210	RSO

Date	β - γ c/m	Bkgd.	Date	α c/m	Bkgd.

Dept. _____ Name _____ Bldg. _____ Room _____ Isotope CS 137 Amount 198.4g

RSO-5

Co 57

SEALED SOURCE RECORD

Leak Test

Date: 8/31/82 Isotope: ⁶⁰Co Ser # 3510679A-06

Date	β - γ c/m	Bkgd. c/r	Date	α c/m	Bkgd.
8/31/82	34	42	Rest. by Matthew RSO		

Date	β - γ c/m	Bkgd.	Date	α c/m	Bkgd.

Dept. _____ Name _____ Bldg. _____ Room _____ Isotope ⁶⁰Co 57 Amount 328.9g.

