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DETROIT-MACOMB HOSPITAL CORPORATION

30-12995

7815 EAST JEFFERSON / DETROIT, MICHIGAN 48214 / TELEPHONE 821-6000

June 10, 1985

Mr. D. J. Sreniawski, Chief
Nuclear Materials Safety
Section 2
U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Ref.: License N:
21-01190-05

Dear Mr. Sreniawski:

In response to your letter of May 17, 1985, I submit the following information to correct the non-compliance items indicated in your letter:

1. The Calicheck Kit will be used in accordance with the procedures established by the manufacturer, as specified in License Condition N:16.

2. The accuracy test for the dose calibrator will be performed annually as specified in License Condition N:17.

To assure compliance to these items, the Radiation Safety Officer will personally supervise the test performances until operation personnel are familiar with how the tests are to be run and the expected results. The first of these tests were satisfactorily performed on Friday, May 31, 1985. The results of these tests are enclosed.

If additional information is required, please contact Mr. C. J. Damico, Radiation Safety Officer for the Corporation at (313) 573-5237.

Sincerely,

Jack Ryan, M.D.
President

/sn

Attachments
cc: Messrs. C. J. Damico, Gareth Mitchell, Richard T. Young
D. L. Otto, M.D.

DATA SHEET #1: *(To be completed only ONCE)**

Performed 5/31/85

Kit Calibration

TESTS SUPERVISED BY C. J. DAMICO, R.S.O.

All readings must be taken at lowest range setting available and converted to mCi units.

TUBES A	DISPLAYED ACTIVITY B		CALIBRATION FACTORS C
Black Only / Black Only	107 mCi / 107 mCi	=	1.00
Black Only / Black & Red	107 mCi / 57.4 mCi	=	1.86
Black Only / Black & Orange	107 mCi / 31.2 mCi	=	3.43
Black Only / Black & Yellow	107 mCi / 7.83 mCi	=	13.67
Black Only / Black & Green	107 mCi / 2.17 mCi	=	49.31
Black Only / Black & Blue	107 mCi / 0.77 mCi	=	139.0
Black Only / Black & Purple	107 mCi / 0.238 mCi	=	449.6

SOURCE CONFIGURATION

____ Syringe

X Vial

*Or following repair of dose calibrator or Calicheck Kit. In all instances these factors can only be determined following proof of activity linearity by standard techniques. KEEP THIS FORM FOR FUTURE REFERENCE!

DATA SHEET #2 *(to be completed each quarter)*

Dose Calibrator Activity Linearity Check

Dose Calibrator Radx Date 5/31/85

Model Assayer 1 Technologist F. Allen

Source Configuration Vial *(must be same as on Data Sheet #1)*

All readings must be taken at lowest range setting available and converted to mCi units.

A TUBE COLOR	B DISPLAYED ACTIVITY		C CALIBRATION FACTOR		D PRODUCT OF B X C
Black Only:	107 mCi	X	1.00	=	107
Black & Red:	57.3 mCi	X	1.86	=	106.6
Black & Orange:	31.7 mCi	X	3.43	=	108.7
Black & Yellow:	7.8 mCi	X	13.67	=	106.6
Black & Green:	2.24 mCi	X	49.31	=	110.5
Black & Blue:	.738 mCi	X	139.0	=	102.6
Black & Purple:	.242 mCi	X	449.6	=	108.8
				SUM =	750.8

MEAN = SUM / 7 = 107.3

MEAN X 1.05 = 112.6 = UPPER LIMIT*

MEAN X 0.95 = 101.9 = LOWER LIMIT*

Compare Column D data to upper and lower limits to confirm linearity.

*Instead of a variation in the Column D data of ± 5%, your radioactive material licence may allow a difference of ± 10% in the test results. If so, multipliers of 1.10 and 0.90 can be used to determine the upper and lower limits.

ACCURACY TEST

DOSE CALIBRATOR - DETROIT MEMORIAL - 5/31/85

SOURCE CALIB. DATE	A_O	CALCUL. A_N	DETECTED A_N	VARIANCE
CESIUM-137 8/4/78	227 uCi	194 uCi	192.7 uCi	-0.5%
BARIUM-133 8/4/78	207 uCi	126.4 uCi	121.0 uCi	-4.4%
COBALT-57	5.3 mCi	4.02 mCi	3.91 mCi	-2.9%

TESTS PERFORMED BY C. J. DAMICO, R.S.O.