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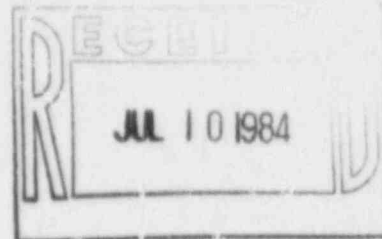
Vaughn C. Moore, Ph.D.  
3601 Evergreen Rd.  
Fargo, ND 58102

Home: 701-235-5194  
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(Certified by the American Board of Radiology)

July 5, 1984

R. T. Hall  
Chief  
Technical Program Branch  
U. S. Nuclear Regulatory Commission  
Region IV  
611 Ryan Plaza Drive, Suite 1000  
Arlington, TX 76011



Subject: Instrument Linearity Test for Radioisotope Calibrator for  
Community Memorial Hospital, Sidney, MT.

Dear Mr. Hall:

Enclosed is a copy of a linearity analysis performed recently on the  
Capintec CRC-17 Dose Calibrator at Community Memorial Hospital in  
Sidney, MT. This is in response to your letter of June 14, 1984, to  
that hospital after an inspection by Mr. Charles Hooker.

Sincerely,

*Vaughn C. Moore, Ph.D.*  
Vaughn C. Moore, Ph. D.

cc. Dennis Damm

Enclosures

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July 5, 1984

Nuclear Medicine  
Community Memorial Hospital  
215 12th Ave. SW  
Sidney, MT 59270

Subject: Instrument Linearity Test for Radioisotope Calibrator.

Reference: "Guide for the Preparation of Applications for Medical  
Programs" NRC 1980

Results of the instrument linearity test of the Capintec CRC-17 Dose Calibrator performed on July 2, 1984, have been analyzed. These results are given in the following table.

Assay Time (hours)	Measured Activity	Predicted Activity	% Error
0.0	477.0mCi	468.5mCi	1.8
5.3	250.0mCi	255.4mCi	-2.1
24.1	29.6mCi	28.8mCi	2.6
29.5	15.6mCi	15.6mCi	0.0
48.5	1.77mCi	1.72mCi	3.0

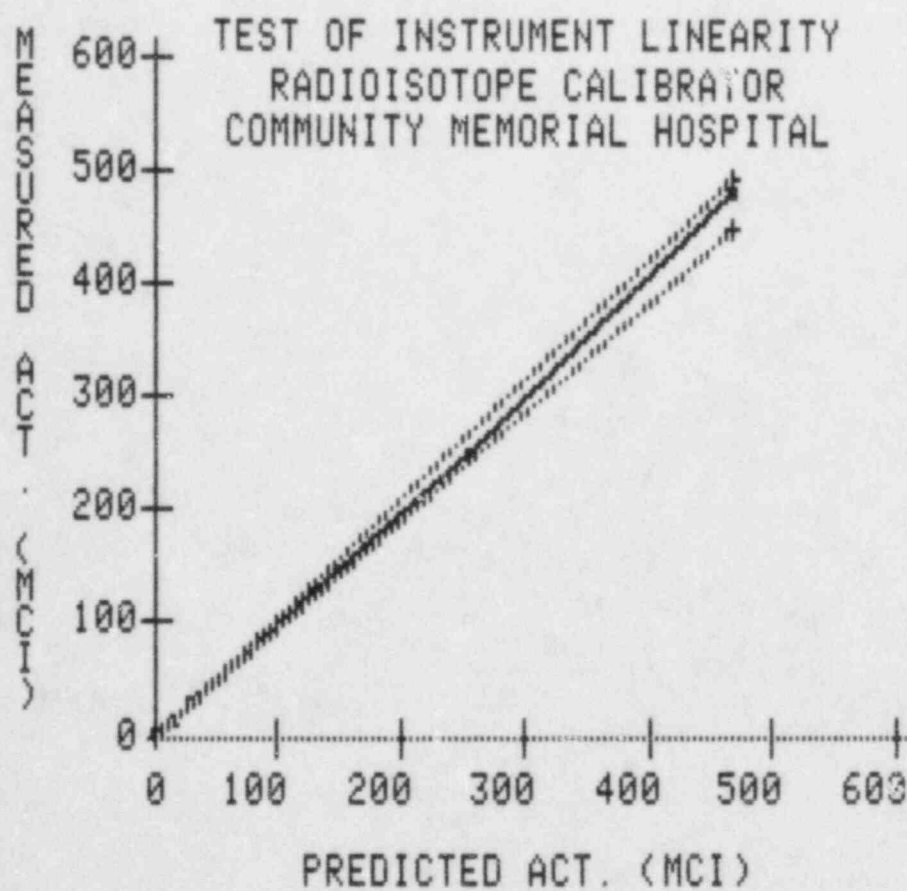
Variations up to  $\pm 5\%$  are permissible. All of the above results are within the acceptable limits.

The results of the above analysis are given in the accompanying graph. The dashed lines in the graph represent the  $\pm 5\%$  limits.

The US Nuclear Regulatory Commission requires that the linearity tests be carried out quarterly. I suggest that you mark your calendar for October 2, 1984. Just prior to that time, I will send you a form for recording the data.

Sincerely,

*Vaughn C. Moore, Ph.D.*  
Vaughn C. Moore, Ph. D.



*Vaughn P. Moore, Ph.D.*  
7/2/84