Medical Center

West Spring Street
West Haven CT 06516

Veterans Administration

In Reply Refer To:

November 9, 1989

Mr. John Miller
Nuclear Materials Safety Branch
Division of Radiation Safety and Safeguards
United States Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406

Dear Mr. Miller:

Your recent visit to this facility was appreciated. As a result of your findings, the following preliminary actions have been taken:

1) Nuclear Medicine Department

Dose calibrator quality control procedures have been reviewed and the necessity of accuracy testing annually, linearity testing quarterly, and constancy testing each day the calibrator is used, reemphasized. As attachments please find copies of the accuracy and linearity tests performed on the Capintec dose calibrator subsequent to your inspection. In addition, a copy of the constancy test performed by the on-call technologist over the weekend of November 4 is included.

Dr. Dey's training and experience, including Board certification in Nuclear Medicine, have been reviewed by the Medical Isotopes/Radiation Safety Committee and her use of radioisotopes for the practice of clinical nuclear medicine has been approved. A letter designating Dr. Dey as the newly appointed chairman of the Medical Isotopes Commitee has been sent to Dr. Glenn.

2) Management Commitment to the Radiation Safety Program

A representative of management was present at the interim meeting of the Radiation Safety Committee held on November 7, 1989 and will attend future quarterly meetings.

Hospital administration has been receptive to the comments made during the inspection and has assured me that additional personnel and equipment will be allocated to the radiation safety program.

3) Radiation Safety Officer

Management has agreed to the recruitment of a full-time Radiation Safety Officer. A job description for this position has been developed, and forwarded to the Personnel office.

4) Waste Storage and Dispoal

Subsequent to the inspection, a sample of ash from the incinerator was analyzed for radioactivity. This showed trace amounts of uranium, thorium and cobalt. The uranium and thorium may be naturally occurring in the incinerator firebrick. Trace amounts of cobalt may be due to incineration of materials from the clinical laboratory. The presence of a beta emitter could not be documented.

Information from the semi-annual inventory of radioisotopes onducted in the spring of 1989 was collated and prepared in report form. A copy is attached. The semi-annual inventory for the fall 1989 is currently in progress.

The waste storage space is under reorganization. Per your recommendation, stored waste is being packed for shipment under the direction of Mr. Holeman, Yale University, and will be shipped as soon as completed. No waste will be accepted by the RSO for storage unless properly labeled. Pallets have been requested to elevate waste storage barrels off the floor to preclude the possibility of water damage.

5) Research laboratory

The investigator whose laboratory was found deficient during the inspection has been suspended by the Radiation Safety Committee from ordering radioisotopes until he can review procedures to demonstrate compliance within his laboratory. A training session has been conducted for his laboratory. His survey meter will be calibrated.

I am confident that the radiation safety program at the West Haven VA Medical Center will be strengthened as a result of the recent inspection and actions taken thereafter. If I can provide additional information, please do not hesitate to contact me at the address above or at (203) 937-3866.

Sincerely,

Holley M. Dey, M.D.
Assistant Chief, Nuclear Medicine
Chairman, Medical Isotopes Committee

DOSE CALIBRATOR ACCURACY TEST

DATE: 11/03/89 BY: William Simmons RSO: Acting William Simmons

ACCURACY SOURCES:

225. uCi of Cs-137
Model: NES 356
SN: 319-188-05
Calibration Date:
03/10/78
172.12uCi

1st assay: 174.7 uCi
2nd assay: 174.5 uCi
3rd assay: 175.6 uCi
average: 174.9 uCi
dev: -1.61

4790 uCi of Co-57
Model:
SN: 11920
Calibration Date:
07/15/84
2.34 uCi

1st assay: 2.40 uCi
2nd assay: 2.40 uCi
3rd assay: 2.42 uCi
average: 2.41 uCi
dev: -2.82

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268. uCi of Ba-133
Model: NES 358
SN: 3580579A-27
Calibration Date:
05/23/79
134.36uC

1st assay: 139.3 uCi
2nd assay: 139.3 uCi
3rd assay: 139.2 uCi
average: 139.27 uCi
dev: -3.65

VETERANS ADMINISTRATION MEDICAL CENTER

NUCLEAR MEDICINE DEPARTMENT

NOVEMBER 03, 1989

Dose Calibrator Accuracy/Consistency NRC # 06-00092-05

Dose Cal. Model ___: CRC - 17 Manufacturer ___: CAPINTEC
Serial # _____: 17547 Location _____: 2-16-A

Ref. Source	Ref. Manuf.	Ref. Ser.#	Radiopharm.(Window)	Predicted Act.	DC Reading	Deviations	Date	TECH
Cs - 137	NEN	319-188-05		172.12 uCi	174.90 uCi	-1.61 %	11-03-89	WDB
Co - 57	AMERSHAM	9046NA		2.34 uCi	2.41 uCi	+2.87 %	11-03-89	WDB
Ba - 133	NEN	3580579A-27		134.36 uCi	139.27 uCi	-3.65 %	11-03-89	WDB

The above Report indicates all of the Dose Cal. Accuracy/Cons. Test have PASSED
All of the Test Results falls within the +/- 5 % NRC/STATE Trigger Limit
Tech. Initials : WDB

VETERANS ADMINISTRATION MEDICAL CENTER

NUCLEAR MEDICINE DEPARTMENT

WEST HAVEN, CONNECTICUT

NOVEMBER 03, 1989 Dose Calibrator Linearity Check # 4 NRC # 06-00092-05

Dose Calibrator _: CRC - 17
Dose Cal. Serial # 17547
Technologist ____: WDS

Manufacturer_: CAPINTEC
Location ____: 2-16-A

#	Assay Hours	Date	Reading	Predicted Act.	%CF	% Range
1	0	10-31-89	684.000 mCi	688.000 mCi	32.000	0.58
2	2	10-31-89	536.000 mCi	546.066 mCi	25.398	1.84
3	6	10-31-89	342.000 mCi	344.000 mCi	16.000	0.58
4	24	11-01-89	43.000 mCi	43.000 mCi	2.000	0.00
5	30	11-01-89	21.500 mCi	21.500 mCi	1.000	0.00
6	48.25	11-02-89	2.500 mCi	2.611 mCi	0.121	4.25
7	55	11-02-89	1.201 mCi	1.197 mCi	0.056	-0.32
8	71.25	11-02-89	0.185 mCi	0.183 mCi	0.009	-1.00
9	76	11-03-89	0.107 mCi	0.106 mCi	0.005	-1.12

% CF - Correction Factor

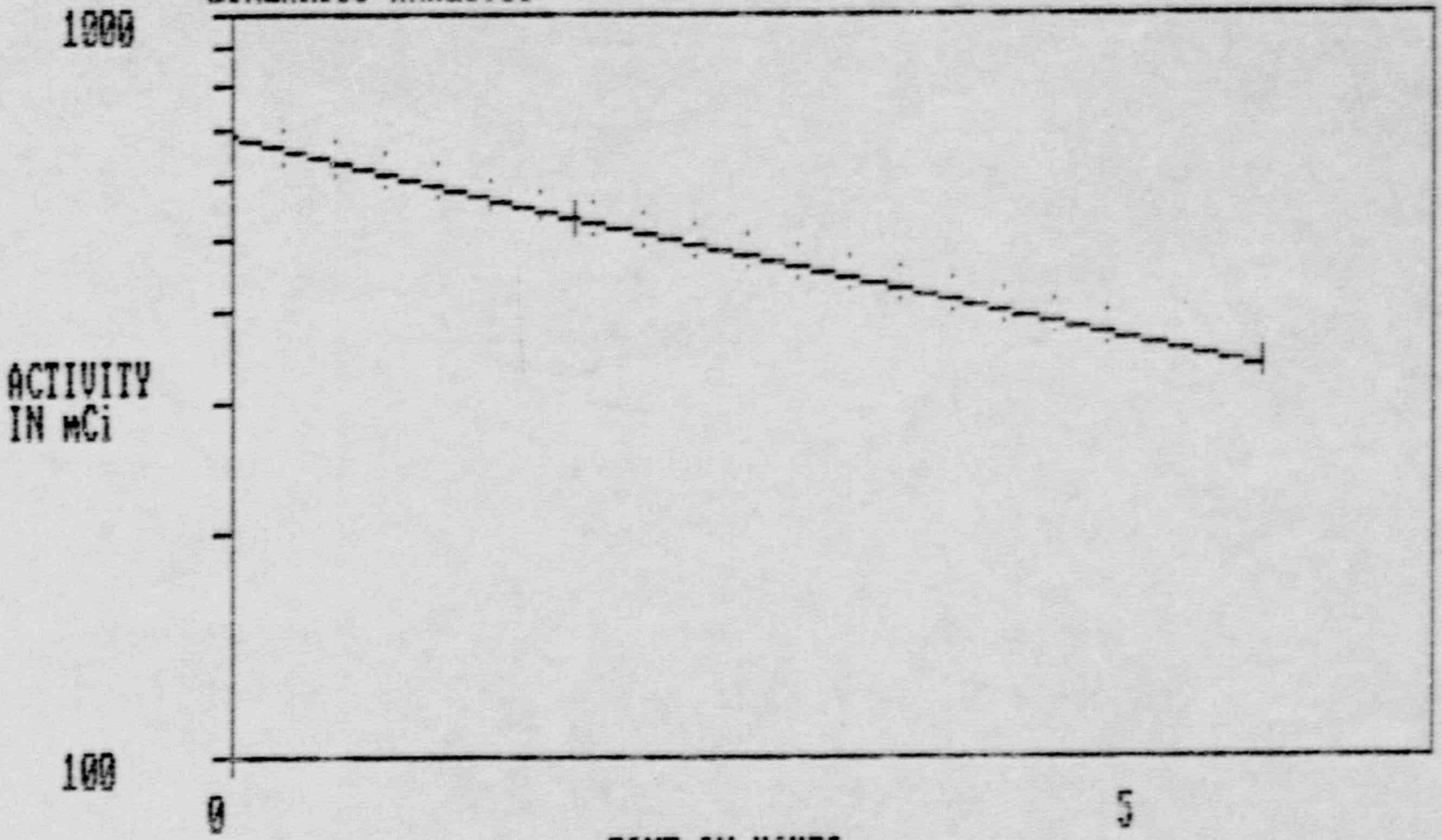
The Linearity Test has PASSED. Reading has fall within +/- 5 % NRC/State Limit

Technologist Initials WDS :

Correction Factor used from 30 hours reading.Net activity of 21.500 mCi measured at 30 hours was used for the calculation of Predicted Activity

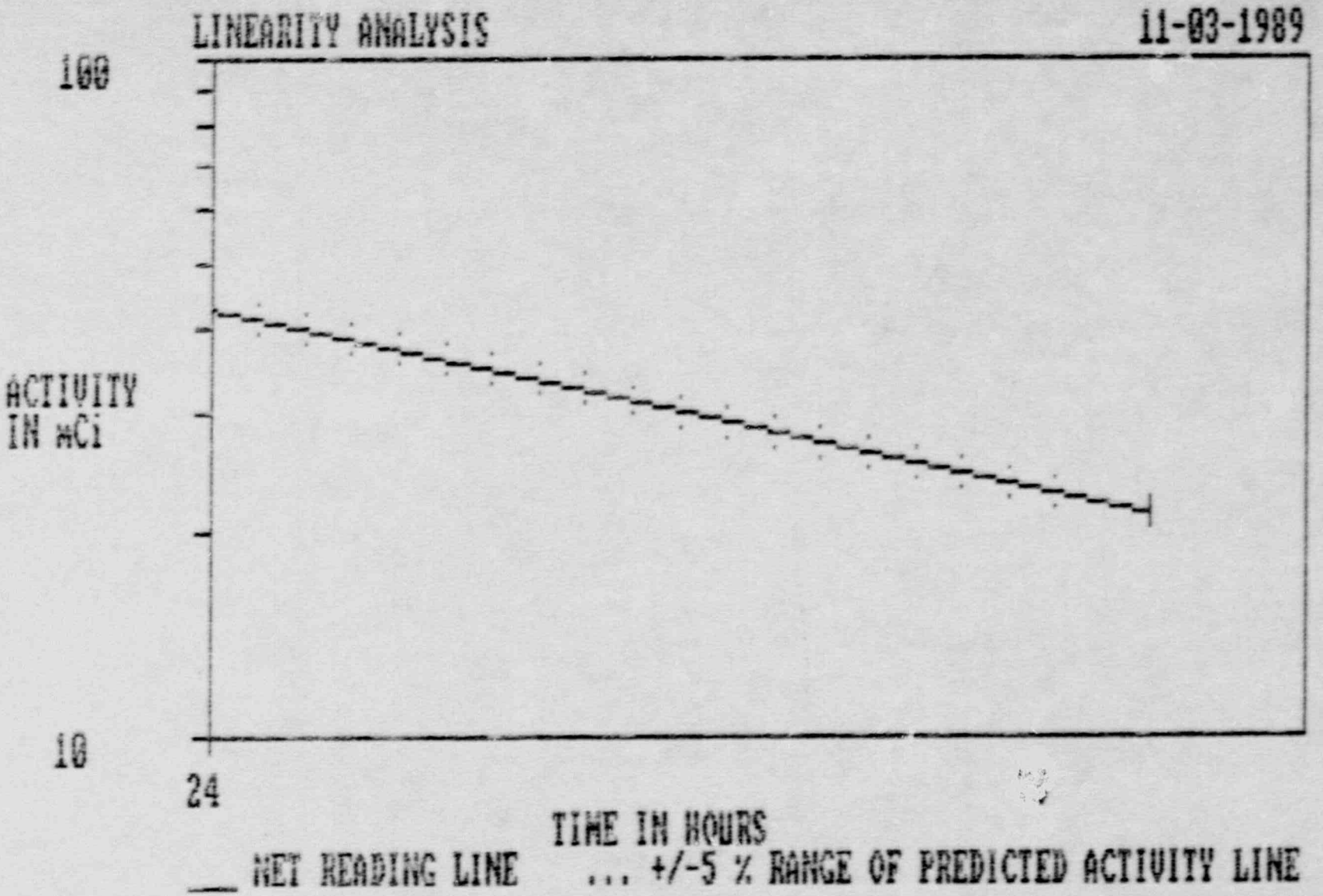
VETERANS ADMINISTRATION MEDICAL CENTER

LINEARITY ANALYSIS 11-03-1989



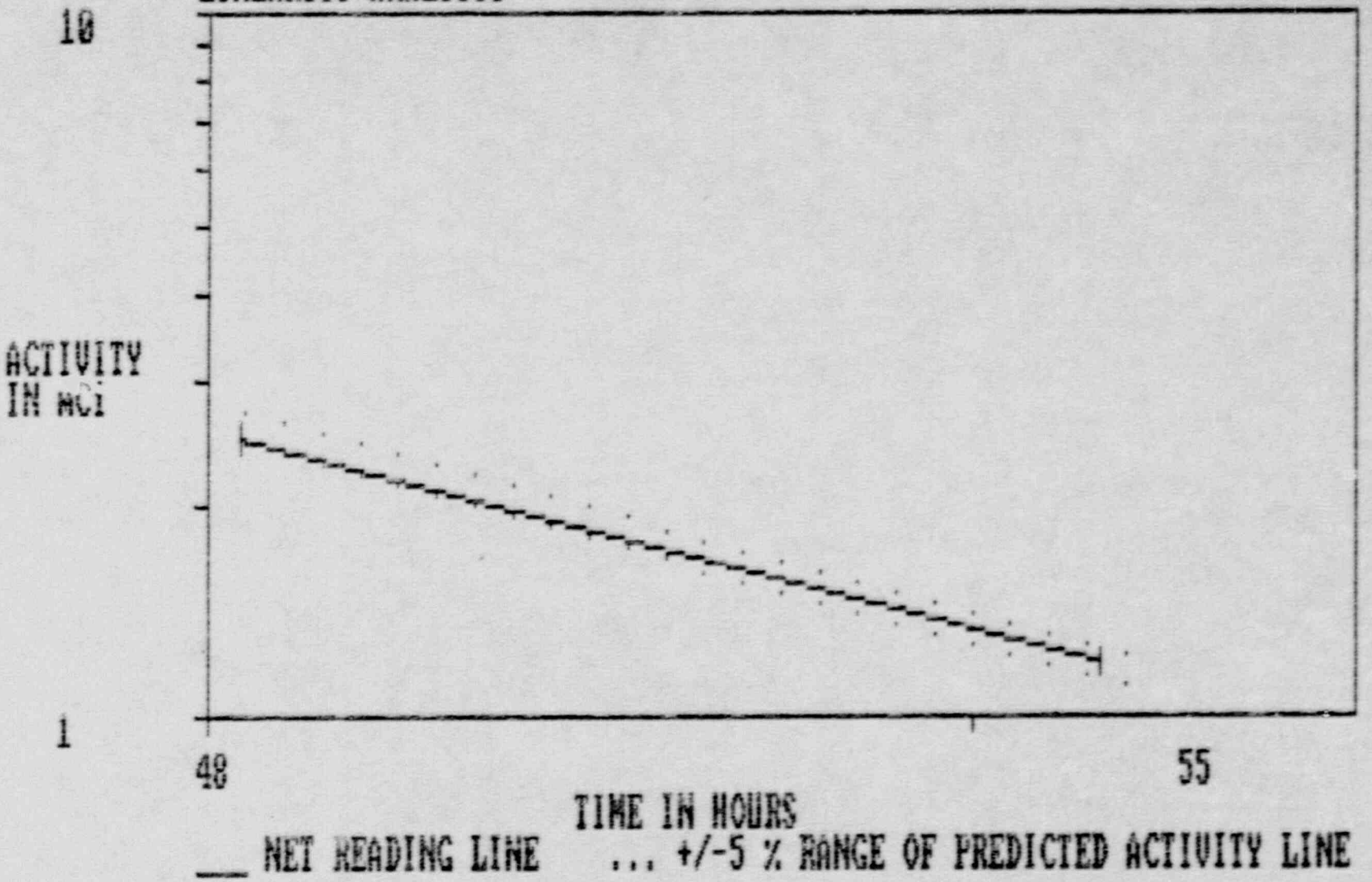
___ NET READING LINE ... +/-5 % RANGE OF PREDICTED ACTIVITY LINE

VETERANS ADMINISTRATION MEDICAL CENTER



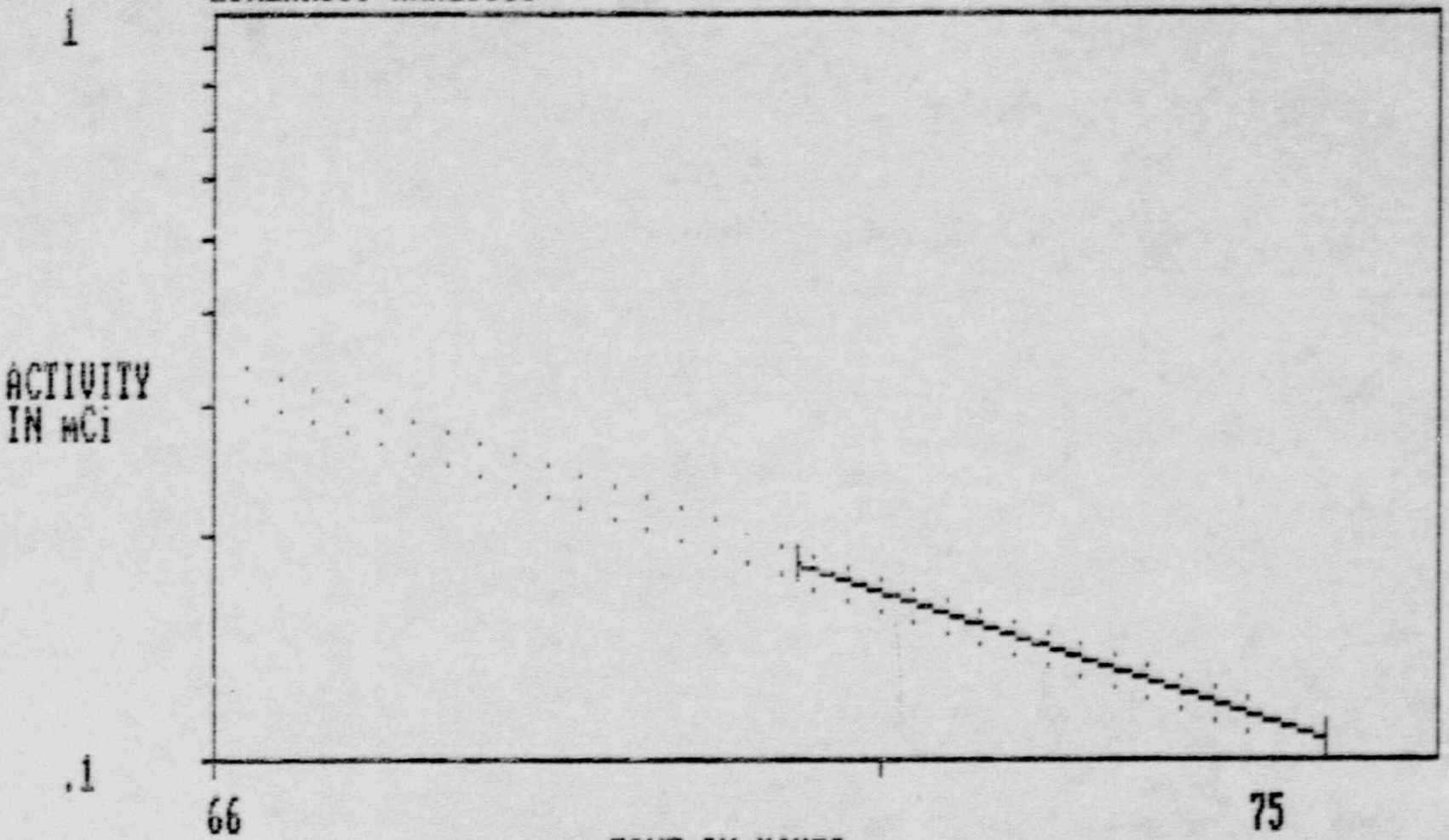
VETERANS ADMINISTRATION MEDICAL CENTER

LINEARITY ANALYSIS 11-03-1989



VETERANS ADMINISTRATION MEDICAL CENTER

LINEARITY ANALYSIS 11-03-1989



___ NET READING LINE ... +/-5 % RANGE OF PREDICTED ACTIVITY LINE

VETERANS ADMINISTRATION MEDICAL CENTER

NUCLEAR MEDICINE DEPARTMENT

NOVEMBER 06, 1989

Dose Calibrator Accuracy/Consistency NRC # 06-00092-05

Dose Cal. Model ___: CRC - 17 Manufacturer ___: CAPINTEC
Serial # _____: 17547 Location _____: 2-16-A

Ref. Source	Ref. Manuf.	Ref. Ser.#	Radiopharm.[Window]	Predicted Act.	DC Reading	Deviations	Date	TECH
Cs - 137	NEN	319-188-05		172.11 uCi	171.50 uCi	0.36 %	11-04-89	JIM
Cs - 137	NEN	319-188-05	Tc99m	317.70 uCi	319.00 uCi	-0.41 %	11-04-89	JIM

The above Report indicates all of the Dose Cal. Accuracy/Cons. Test have PASSED. All of the Test Results falls within the +/- 5 % NRC/STATE Trigger Limit

Tech. Initials : WRS

Veterans Affairs Medical Center
West Haven, Connecticut
Inventory of Radioactive Materials for Research
March 30, 1989

All amounts are given in millicurie units

TOTAL AMOUNT ON HAND

H-3	C-14	I-125	P-32	In-111	S-35
75.15	6.92	1.41	10.50	1.0	3.0

TOTAL AMOUNT RELEASED TO THE SANITARY SEWER (Oct. '88 to Mar '89)

H-3	C-14	I-125	P-32
20.13	0.021	0.234	0.008

Licensed amounts - (1) 300 millicuries of any byproduct, for research, between atomic No. 1-83 inclusively (on Hand).
(2) up to 5 curies of H-3, 1 curie of C-14, and 1 curie of all other isotopes released to the sanitary sewer.

The medical center's effluent remains at a rate of approximately 200,000 gallons per day.

VETERANS ADMINISTRATION MEDICAL CENTER
WEST HAVEN, CONNECTICUT
INVENTORY OF RADIOACTIVE MATERIALS FOR RESEARCH
December 19, 1988

ALL AMOUNTS ARE GIVEN IN MILLICURIE UNITS

TOTAL AMOUNT ON-HAND:

H-3	C-14	I-125	P-32	Cr-51	In-111	Na-22
58.46	12.6	0.194	46.00	0.200	1.0	0.10
Ru-103	**Ce-141**	**S-35**	**Co-57**			
1.0	1.0	3.0	.008			

TOTAL AMOUNT RELEASED TO SANITARY SEWER SYSTEM (03/31/88 - 09/30/88):

H-3	C-14	I-125	P-32	S-35	Cr-51	Co-57
20.098	0.55	0.285	10.53	0.346	0.01	0.01

Licensed Amounts - (1) 300 millicuries of any byproduct, for research, between atomic No. 1 - 83 inclusively (on Hand).
(2) up to 5 curies of H-3, 1 curie of C-14, and 1 curie of all other isotopes released to the sanitary sewer.

The medical center's water effluent remains at a rate of approximately 200,000 gallons per day.

Veterans Administration

Memorandum

Date: September 22, 1989

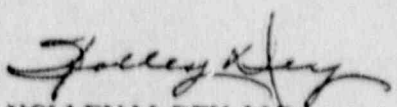
From: Chairman, Medical Isotopes Committee

Subj: Management Representation on Medical Isotopes Committee

To: Medical Center Director (00)

1. At the most recent regional meeting held in Hartford during June of 1989, the Nuclear Regulatory Commission reemphasized the importance of hospital administration's input to each institution's radiation safety program. The published rules were reviewed, including those which govern the Radiation Safety Committee. Specifically, regulation 35.22 states that "To establish a quorum and to conduct business, at least one-half of the Committee's membership must be present, including the Radiation Safety Officer and the management's representative."

2. In order to assure compliance with NRC regulations, your help would be greatly appreciated in identifying a representative from management to actively serve on, and attend the quarterly meetings of, the Medical Isotopes Committee.



HOLLEY M. DEY, M.D.
Assistant Chief, Nuclear Medicine Service
Chairman, Medical Isotopes Committee

Department of Veterans Affairs

689/115

Medical Center
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West Haven CT 06516

Official Business
Penalty for private use
$300
Return after five days

Postage and Fees Paid
Veterans Administration
VA 601

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Division of Radiation Safety and Safeguards
United States Nuclear Regulatory Commission
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King of Prussia, PA 19406

Charlie G.

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