

APPENDIX A

June 4, 1981

US Nuclear Regulatory Commission, Region V
Office of Inspection and Enforcement
1990 N. California Boulevard
Suite 202, Walnut Creek Plaza
Walnut Creek, California 94596

SUBJECT: Exposure of One Individual in Excess of 1.5 Rems Per Calendar
Quarter

Attached is a copy of a report from the Radiation Safety Officer concerning exposures to X-ray and Nuclear Medicine personnel during the period of June 24, 1980 to September 29, 1980. Since it was known to us that Dr. Harris did not go into the restricted area, it was felt that his exposure was entirely due to his activities as Radiologist; therefore, no report was filed. At an NRC Enforcement Conference held on May 8, 1981 this matter was discussed and it was pointed out that Dr. Harris was the Radiation Safety Officer and did have access to the restricted area and that even if some of his exposure was due to sources other than those covered in the license we were not in compliance by making no report.

We are, therefore, reporting that Dr. George Harris received 1.5 rems of whole body exposure during the period of June 24, 1980 to September 29, 1980. Dr. Harris has been notified of this exposure.

V. I. McINTYRE
Medical Center Director

1 Enclosure
as

649/115

8107150336 810702
NMS LIC30
02-12726-01 PDR

File w/ Radiation Safety Committee

UNITED STATES GOVERNMENT

Memorandum

DATE 10/31/80

TO: Chairman, Radiation Safety & Isotope Committee (113)
THRU: Chief of Staff (11)

FROM: Radiation Safety Officer (114)

SUBJECT: Status of Radiation Exposure

In compliance with paragraph 4c, Station Memorandum #64, dated July 1, 1980, reported below is the status of radiation exposure to individuals working in Radiology, Nuclear Medicine, and Dental Service during the 3rd and 4th quarters of FY-80:

Radiology Service: The maximum whole body radiation for a single individual was for Dr. Harris who received 805 millirems during the 3rd quarter and 1500 millirems during the 4th quarter. The level of 1500 millirems in one quarter is slightly above the NCRP recommendations of 1.2 rems per quarter, but Dr. Harris received 2725 millirems for the first three quarters of calendar year 1980, and this is well within the maximum permissible dose. All other levels of radiation exposure to other individuals in the Radiology Service were well below the maximum permissible dose.

Dental Service: There were no measurable levels of radiation exposure to any of the film badges from any of the people in the Dental Service during the last two quarters of FY-81.

Nuclear Medicine Service: Mr. Johnson received 265 millirems whole body radiation during the 3rd quarter and 185 millirems whole body during the 4th quarter of FY-81. Readings on the ring finger were 450 millirems and 940 millirems, respectively, for the two quarters. These levels are well below investigational level II established by the ALARA Program. I discussed this with Mr. Johnson and he has been instructed by Mr. Fisher, the consultant radiation physicist, to place used syringes in a lead lined box instead of in an ordinary wood box as has been done in the past, this was done just at the beginning of the 4th quarter, and as noted above, has resulted in appreciable decrease in whole body radiation. The levels quoted above for ring finger radiation exposure are well below investigational level I, as established by the ALARA Program.

No additional comments are needed with regard to Nuclear Medicine Service. We anticipate that some time during the early part of FY-81 Mr. Johnson will succeed in lowering the whole body radiation dose down to 125 millirems which is just about at investigational level I.


G. H. HARRIS, M.D.

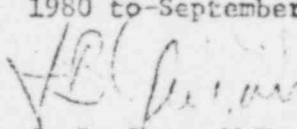
APPENDIX B

May 11, 1981

Dr. George Harris
2210 Alta Vista Place
Prescott, Arizona 86301

Dear Dr. Harris:

Pursuant to CFR 19.13., you are hereby notified that you received
1.5 rems of exposure to radiation during the period of June 24,
1980 to September 29, 1980.


J. B. Gere, M.D., Chairman
Nuclear Medicine Committee



Veterans
Administration

Date: April 3, 1981

Memorandum

To: Acting Chief, Nuclear Medicine Service
THRU: Chief of Staff
Subj: Physician Coverage

In accordance with recommendations of the Nuclear Medicine Committee, it will be the policy that no nuclides will be administered to patients when the authorized users are not in the hospital.

A handwritten signature in cursive script, appearing to read 'V. I. McIntyre'.

V. I. McINTYRE
Medical Center Director

Veterans Administration Center
Prescott, Arizona

April 3, 1981

ISOTOPE COMMITTEE

1. The Isotope Committee met on April 1, 1981 at 3 PM. Present were Dr. Gere, Chairman, Dr's. Trahern and Briney, Mr. Sabin and Bob Johnson.
2. Minutes of the last meeting were reviewed.
3. Dr. Gere explained that the Nuclear Medicine department was inspected by a representative from the Nuclear Regulatory Commission on the previous week and that several things were noted in which the department does not comply with the NRC License. A letter will be received noting the deficiencies and we will be expected to reply. Dr. Gere further explained that nothing has been done in the department to put patients or employees at any risk. One question asked by the inspector was what supervision was provided during the times Dr. Gere was on leave. Following discussion, the committee recommended that no nuclides be administered to patients while Dr. Gere is absent from the hospital. An amendment to the NRC License adding Dr. Poncel as a responsible user will be requested from the NRC. Another non-compliance item was exceeding five Xenon studies per week. The committee directed the Nuclear Medicine Service to limit Xenon studies to five per week as specified in the license.
4. Another area of concern is that Dr. Harris is no longer here and a new Radiation Safety Officer must be appointed. Following discussion, the committee recommended that Dr. Gere be appointed Radiation Safety Officer. Dr. Gere will act in this capacity until approved.
5. Mr. Fisher, Nuclear Physicist, was here last week and has agreed to return to conduct retraining course for Bob Johnson and Darlene Albrecht in assay of Tc99 for Mo99 contamination. Plans are to have him visit twice in April. He will be reviewing our license which will be amended.
6. Dr. Gere commented that there is a need to change the present method for monitoring Nuclear Medicine area. A wipe test should be adopted for monitoring. This will require replacement of the Picker Well Counter. Consideration must be given to requesting a Well Counter and Scaler; estimated price \$5,000. This would be replacement equipment and designated as an unfunded need.
7. Dr. Gere again pointed out that any definitive action will be deferred in regards to the NRC inspection until the letter from the inspector is received; however, steps can be taken now to: 1) Cut Xenon VQ studies to 5 per week. 2) Provide retraining and documentation. 3) Begin steps for amendments to the NRC License. Another meeting will be scheduled upon receipt of the letter.
8. Bob Johnson gave a report on the workload. There were 318 tests during 2nd Quarter FY81 as compared to 284 the 1st Quarter FY81. There were 38 Xenon studies during 2nd Quarter.

9. There was no further business for discussion and the meeting adjourned.

Jane R. Nave
JANE R. NAVE

APPROVED:

J. B. Gere

J. B. GERE, M.D., Chairman

APPENDIX D

WILLIAM G. FISHER, M.S.

MEDICAL PHYSICIST

2039 EAST BROADWAY ROAD 112
TEMPE, ARIZONA 85282
PHONE: (602) 967-6993

April 14, 1981

J. Brewster Gere, M.D.
Chief
Nuclear Medicine Services
Veterans Administration Medical Center
Prescott, AZ 86313

Dear Doctor Gere:

As requested by you and the Medical Isotope Committee, I performed inservice education and training to Nuclear Medicine personnel on April 7, 1981. In attendance were: Robert Johnson, R.T., and Darlene Arbrecht, R.T.

The following topics were discussed:

- (1) Results of the recent linearity tests of the radioisotope dose calibrator and the physical meaning and importance of this test.
- (2) Calibration curves of the standard reference sources used to check the daily repeatability and accuracy of the dose calibrator.
- (3) Molybdenum-99 break through tests, including the procedure, calculations, results, interpretation of results and significance.
- (4) Procedures for performing wipe area surveys.

The personnel in attendance should now have a better understanding of these important topics and how these topics relate to the field of Nuclear Medicine in General.

Additional training sessions will be forthcoming during succeeding visits.

Sincerely,

Wm. G. Fisher

William G. Fisher, M.S.
Medical Physicist

WGF/P&E/kr

I attended the above inservice training. I understand their importance and can perform these procedures satisfactorily.

Robert Johnson

Robert Johnson, RT

Darlene Arbrecht
Darlene Arbrecht, RT

WILLIAM G. FISHER, M.S.

MEDICAL PHYSICIST

2039 EAST BROADWAY ROAD #12
TEMPE, ARIZONA 85282
PHONE: (602) 967-6993Linearity Test

Manufacturer CA INTEC Date 1/27/81
 Model CRC 30 Operator R.L. JOHNSON *R.L.J.*
 Serial No. 20158 Linear Yes X No

	Column 1	Column 2	Column 3	Column 4
TIME (HOURS)	CALCULATED ACTIVITY	CALCULATED ACTIVITY -5%	MEASURED ACTIVITY	CALCULATED ACTIVITY +5%
9 AM	342.9 Kci	325.8 Kci	346.0 Kci	360.0 Kci
3 PM	171.8 Kci	163.2 Kci	172.5 Kci	180.4 Kci
9 AM	21.62 Kci	20.44 Kci	21.40 Kci	22.71 Kci
3 PM	10.84 Kci	10.30 Kci	10.84 Kci	11.38 Kci
9 AM	1.366 Kci	1.296 Kci	1.340 Kci	1.436 Kci

WILLIAM G. FISHER, M.S.

MEDICAL PHYSICIST

2039 EAST BROADWAY ROAD 112
TEMPE ARIZONA 85282
PHONE: (602) 967-6993

Linearity Test

Manufacturer CAMTEC Date 4/1/81
Model CRC 30 Operator R.L. JOHNSON *RLJ*
Serial No. 20158 Linear Yes X No

Column 1 Column 2 Column 3 Column 4

TIME (HOURS)	CALCULATED ACTIVITY	CALCULATED ACTIVITY -5%	MEASURED ACTIVITY	CALCULATED ACTIVITY +5%
8 AM 0	136.0 Mci	129.2 Mci	134.5 Mci	142.8 Mci
2 PM 6	68.16 Mci	64.76 Mci	67.50 Mci	71.56 Mci
8 AM 24	8.58 Mci	8.15 Mci	8.510 Mci	9.01 Mci
2 PM 30	4.30 Mci	4.08 Mci	4.30 Mci	4.32 Mci
8 AM 48	.54 Mci	.51 Mci	.52 Mci	.57 Mci

APPENDIX F

Veterans Administration Medical Center
Prescott, Arizona

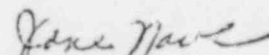
May 26, 1981

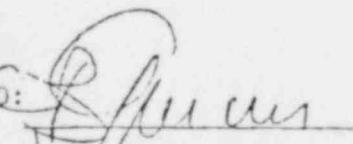
RADIATION SAFETY AND RADIOISOTOPE COMMITTEE

1. A meeting was called by the chairman of the committee on May 26, 1981 at 3 PM for the purpose of hearing comments from the committee members regarding the recent Nuclear Regulatory Commission inspection and to establish an agenda of policies and procedures for future committee meetings. Present at this meeting were: Dr. Gere, Chairman, Dr's. Briney, Trahern and Parks, Mr. Sabin and Bob Johnson.
2. Following a discussion regarding an annual review of policies and practices and what is allowed by the License and what is actually being done in the department, the month of October was selected for an annual meeting to review the entire radiation safety program.
3. Quarterly meetings will include the following items on its agenda:
 - A. Radiation Safety.
 - (1) Film Badges:
 - (2) Monitoring of Department:
 - (3) Review of Records for Receipt, Administration and Disposal of Nuclides.
 - (4) Wipe Tests.
 - (5) Linearity Tests.
 - B. Training: (Annual training of technical and non-technical personnel including housekeeping personnel assigned in the area. Nuclear Medicine technician is expected to alert the Safety Officer when a new housekeeping employee is assigned to the area; training schedule will be coordinated with Chief, Houskeeping.)
4. Dr. Gere recommended that the Nuclear Physicist, William Fisher, be appointed to the committee. Recommendation was approved by committee members. Quarterly meetings will be scheduled so that Mr. Fisher can be present.
5. Some policies and practices in which we were cited for noncompliance have since been changed and put into effect. For instance, no nuclides will be administered when Dr. Gere, the Radiation Safety Officer, is not present in the building. Also, the first priority each morning will be for Dr. Gere to review the scans requested and approve before they are performed. Before any Tc^{99m} is administered, the results of the Mo^{99m} contamination assay will be approved by Dr. Gere.
6. When asked if members had any questions regarding our responsibilities, some other points in question were establishing an agenda which would be in line with special conditions prescribed in para 5, Appendix B of our License Application, a copy of which was sent to each member prior to the meeting; annual physical of the technician in regards to nuclear exposure and documentation of such, is this being carried out or is it even required. Also there was concern expressed about the frequency in which one enters the Nuclear department and who would require a film badge. Dr. Gere stated that it would be the committee's responsibility to see that

anyone going into the Nuclear Medicine department wears a film badge. There was also some discussion about reviewing the list of film badges; This will be the responsibility of the Radiation Safety Officer. Dr. Gere stated that a "model" agenda will be prepared and sent out to each committee member for approval.

7. There was no further business and the meeting adjourned at 3:40 PM.


JANE NAVH
Secretary

APPROVED: 
J. B. GERE, M.D.
Committee Chairman

Memorandum


DATE: 5/11/81

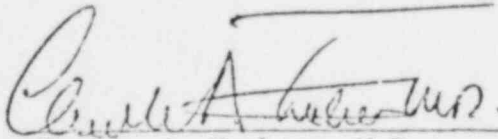
TO: Nuclear Medicine Committee

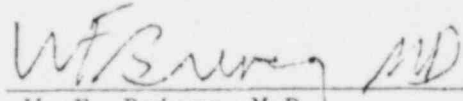
FROM: Chairman, Nuclear Medicine Committee

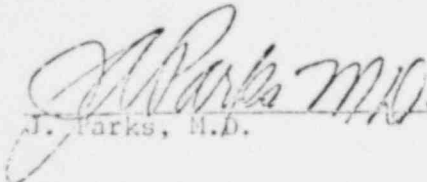
SUBJ: Notice of Violation

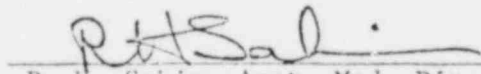
1. Enclosed is a draft of the Notice of Violation which followed the inspection of our Nuclear Medicine Service on March 26, 1981. The items of non-compliance are fairly self explanatory.
2. Of particular importance are the questions raised concerning the functioning of the Nuclear Medicine Committee.
3. Please read and initial this cover letter to indicate that you have read the draft.
4. We will hold a special meeting during the week of May 18-22, to discuss this draft, review the duties and responsibilities of the committee as defined in the license and to draw up an agenda for meetings which will assure that we carry out our responsibilities.


 J. B. GERE, M.D., Chairman
 Nuclear Medicine Committee


 Charles A. Trahern, M.D.


 W. F. Briney, M.D.


 J. Parks, M.D.


 R. H. Sabin, Asst. Med. Director

