

1020 Franklin Street  
Johnstown, PA 15905  
(814) 533-1000  
FAX (814) 533-1868



November 12, 1990

Mohamed M. Shanbaky, Chief  
Nuclear Materials Safety Section A  
Division of Radiation Safety and Safeguards  
Nuclear Regulatory Commission, Region I  
475 Allendale Road  
King of Prussia, PA 19406

Docket No: 030-03046 License No: 37-05272-02  
Routine Inspection: 030-03045/90/001

Dear Mr. Shanbaky:

This letter is provided to you as a response to your letter dated October 23, 1990, regarding your inspection of the Mercy Hospital of Johnstown Nuclear Medicine Department. Enclosed you will please find the responses to your noted areas of violation given in sequence:

A. The Executive Management Team of the Mercy Hospital of Johnstown has changed completely in 1990. Sam Krinsky, M.D., Ph.D., Radiation Safety Officer, is no longer on the Medical Staff of the Hospital.

I cannot provide you an answer as to why Administration did not attend the Radiation Safety Committee meetings during September, 1988 and December, 1988. The Radiation Safety Committee has been totally reorganized to include all the required members. A listing of the current Committee membership and positions are attached for your review.

B. An annual review of the Radiation Safety Program was conducted by the Radiation Safety Committee and Radiation Safety Officer on March 6, 1989, and September 19, 1990. Enclosed you will find copies of these.

C. The film badges for the period of May 10, 1990 through June 9, 1990 were sent to Landauer. However, somewhere in the transportation of the badges, they were lost. Our consulting physicist has estimated the dose to the personnel for this period. Enclosed you will find a copy of the estimated data.

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REG1 LIC30  
37-05272-02 PDR

TO: Mohamed M. Shanbaky, Chief  
Nuclear Materials Safety Section A  
Division of Radiation Safety and Safeguards  
Nuclear Regulatory Commission, Region I

-2-

DATE: November 14, 1990

I believe this sufficiently addresses all the noted violations. If you have any other questions, please do not hesitate to contact me. I would like to add, as a new Administrator to Pennsylvania, I found the inspection to be very educational and of great assistance in operating our department within the scope of our license. Mrs. Marlene Taylor was very helpful and accommodating to our questions and concerns.

Thank you.

Very truly yours,



Timothy J. Karnes  
Senior Vice President of Operations

TJK/sds

Enclosures

CC: John Straczek, Director - Imaging Sciences  
Louise Stumpo, Chief Technologist - Nuclear Medicine  
William Reisinger, M.D. - Radiation Safety Officer

RADIATION SAFETY COMMITTEE

William Reisinger, M.D.  
Thomas Aretz, M.D.  
Louise Stumpo  
John Straczek  
Timothy Karnes  
Maureen Nanna  
Albert Benshoff, M.D.

Radiation Safety Officer  
Staff Radiologist  
Chief Technologist, Nuclear Medicine  
Department Director, Imaging Sciences  
Senior Vice President of Operations  
Vice President of Nursing  
Medical Director, Laboratory

Estimated dose for the period 5/10/90 thru 6/9/90.  
 (See the film badge report for the period 7/10/90 thru 8/9/90)

				Deep	Shallow
00000	CONTROL		G1		
00000	TLD CONTROL				
00024	L STUMPO	190262546	G1	M	M
00024	STUMPO L		U3	-	10
00073	PARTSCH DOLORES	180284927	G1	M	M
00077	SOJAK ELAINE	173464624	G1	M	M
00081	DRAWLEY BETTY	188222908	G1	14	14
00081	BRAWLEY BETTY	188222908	U3	-	5
00092	VERBANO A L	185268943	G1	54	54
00092	VERBANO A L	185268943	U3	-	29
00093	KRINSKY S MD	096340162	G1	2	2
00093	KRINSKY S MD	096340162	U3	-	5
00100	WALTERS T	208382348	G1	2	2

Estimated dose for the period 5/10/90 thru 6/9/90.  
 (See the film badge report for the period 7/10/90 thru 8/9/90)

	FOR EXPOSURE PERIOD			Exp	Shallow
00000	CONTROL		GI		
00000	TLD CONTROL				
00024	L STUMPO	190262546	GI	M	M
00024	STUMPO L		U3	-	10
00073	PARTSCH DOLORES	180284927	GI	M	M
00077	SOJAK ELAINE	173464624	GI	M	M
00081	BRAWLEY BETTY	188222908	GI	14	14
00081	BRAWLEY BETTY	188222908	U3	-	5
00092	VERBANO A L	185268943	GI	P 54	54
00092	VERBANO A L	185268943	U3	-	29
00093	KRINSKY S MD	096340162	GI	2	2
00093	KRINSKY S MD	096340162	U3	-	5
00100	WALTERS T	208382348	GI	2	2

## YEARLY MANAGEMENT AUDIT SURVEY

HOSPITAL	Mercy Hospital	NRC LICENSE #	37-05272-02
ADDRESS	1020 Franklin St. Johnstown, PA. 15905	EXP. DATE	12/31/93
DATE OF SURVEY	9/19/90		
RADIATION SAFETY OFFICER	William Reisinger, M.D.	STATE LICENSE #	PA-8
ADMINISTRATOR	Mr. Phillip Dionne	EXP. DATE	5/31/93
	Administrator		
	(Title)		

- |   |                                      |    |     |
|---|--------------------------------------|----|-----|
| 1. Floor plan for the Nuclear Medicine Department available | <input checked="" type="radio"/> Yes | No | N/A |
| Floor plan for the Nuclear Cardiology Dept. available       | <input checked="" type="radio"/> Yes | No | N/A |
| 2. Are the following areas marked on the floor plan?        |                                      |    |     |
| a. Where isotopes are stored                                | <input checked="" type="radio"/> Yes | No | N/A |
| b. Where radiopharmaceuticals are prepared (radiopharmacy)  | <input checked="" type="radio"/> Yes | No | N/A |
| c. Where patients are injected with radionuclides           | <input checked="" type="radio"/> Yes | No | N/A |
| d. Areas surveyed with a GM counter or with wipes           | <input checked="" type="radio"/> Yes | No | N/A |

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_

### 3. Area Surveys

- |  |                                      |    |                                      |
|--|--------------------------------------|----|--------------------------------------|
| a. Daily operational checks with survey meters.                          | <input checked="" type="radio"/> Yes | No | N/A                                  |
| b. (1) Daily survey with GM counter.                                     | <input checked="" type="radio"/> Yes | No | N/A                                  |
| (2) Trigger levels for controlled and uncontrolled areas for GM survey.  | <input checked="" type="radio"/> Yes | No | N/A                                  |
| c. (1) Weekly surveys, including wipe tests.                             | <input checked="" type="radio"/> Yes | No | N/A                                  |
| (2) Trigger levels for controlled and uncontrolled areas for wipe tests. | <input checked="" type="radio"/> Yes | No | N/A                                  |
| d. Room monitoring for ventilation studies every 6 months.               | <input checked="" type="radio"/> Yes | No | N/A                                  |
| e. Xenon trap monitoring.  | Yes                                  | No | <input checked="" type="radio"/> N/A |

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_

\* Items marked with an asterisk are to be signed by the Radiation Safety Officer

Hospital Mercy Hospital  
 Date 9/19/90

4. Calibration of equipment
- a. Voltage of dose calibrator
  - b. Daily calibration of dose calibrator against Co-57, Cs-137, source.
  - \* c. Linearity checks: 1st qtr. YES, 2nd qtr. YES, 3rd qtr. YES, 4th qtr. \_\_\_\_\_
  - \* d. Accuracy Check: Last date 7/28/90
  - e. Geometrical Variation: Date 7/20/90
  - f. Plastic liner checked & inventory of sealed sources done every 3 months.  Yes No N/A
  - g. Sealed sources with activity greater than 100 uCi leak tested every 6 months.  Yes No N/A
  - h. Plastic liner of the dose calibrator checked routinely  Yes No N/A
  - i. Ambient radiation level measured around the sealed sources  Yes No N/A
  - j. Molybdenum contamination checked after each elution  Yes No N/A
  - k. GM survey meters  Yes No N/A  
 (Dedicated check source sent during calibration)
- |           |                                   |                 |                  |             |                   |
|-----------|-----------------------------------|-----------------|------------------|-------------|-------------------|
|           | (1) Meter <u>G.M. MIN-MONITOR</u> | Last Calibrated | <u>7/30/90</u>   | Sensitivity | <u>2K-CPS/SEC</u> |
| Victoreen | (2) Meter <u>GM Counter #491</u>  | Last Calibrated | <u>Presently</u> | Sensitivity | <u>1MR/HR</u>     |
|           | (3) Meter _____                   | Last Calibrated | _____            | Sensitivity | _____             |
|           | (4) Meter _____                   | Last Calibrated | _____            | Sensitivity | _____             |
- 
- |           |                             |                 |               |             |                 |
|-----------|-----------------------------|-----------------|---------------|-------------|-----------------|
|           | <u>Ionization Chambers</u>  |                 |               |             |                 |
| Victoreen | (1) Meter <u>MoGel #273</u> | Last Calibrated | <u>3/1/90</u> | Sensitivity | <u>25 mA/μv</u> |
|           | (2) Meter _____             | Last Calibrated | _____         | Sensitivity | _____           |

NOTE: Any audio attachments to the survey meters : yes

REMARKS: \_\_\_\_\_

5. Signs
- a. Are the areas properly posted with "Caution Radioactive Material" signs?  Yes No N/A
  - b. Are the areas properly posted with "Caution Radiation Area" signs  Yes No N/A
  - c. Are the areas properly posted with "Caution Airborne Material" signs?  Yes No N/A
  - d. Are there "Notice to Employees" signs posted?  Yes No N/A
  - e. Up to date 10 CFR 19, 20, and 35 available and posted.  Yes No N/A
  - f. Title 25 Section 219 and 220 posted.  Yes No N/A
  - g. Sign prohibiting eating, drinking and smoking in the Nuclear Medicine Department.  Yes No N/A

6. Waste Disposal

- a. Is the technician who orders radiopharmaceuticals aware of maximum possession limits?  Yes No N/A
- b. If isotopes are disposed of through the sewage system has anybody checked the safe limit?  Yes No N/A
- c. Inventory of radiopharmaceuticals done regularly? (Obtained from the radiopharmacy on a daily basis)  Yes No N/A
- d. Waste disposal of radiopharmaceuticals done regularly?  Yes No N/A
- e. Date of storage and disposal recorded  Yes No N/A
- f. Are the solids held for 10 half lives before disposal?  Yes No N/A
- g. Dose rate monitored during disposal and equal to background.  Yes No N/A
- h. All radiation labels removed or obliterated before disposal.  Yes No N/A

7. Miscellaneous

- a. Is there a procedure book available for all the procedures done in the department?  Yes No N/A
- b. Is the prescribed dose mentioned in the procedure book?  Yes No N/A
- c. Is the procedure book checked and signed by a medical physicist?  Yes No N/A
- d. Are the technicians familiar with the new diagnostic misadministration rules? Are they also familiar with the 10% misadministration variation for therapeutic doses.  Yes No N/A
- e. Is the decay of the standard sources done at regular intervals?  Yes No N/A
- f. Are the personnel being monitored with film badges and ring badges and all film badge records available?  Yes No N/A
- g. Do the technicians use syringe shields while handling radionuclides?  Yes No N/A
- h. Do the personnel wear lab coats?  Yes No N/A
- i. Are the misadministration reported to the NRC and/or state and discussed at the radiation safety committee meeting?  Yes No N/A
- j. Do the technologists check the dose calibrator and survey the areas on weekends on holidays or call?  Yes No N/A
- k. Are at least 4 quarterly radiation safety committee meetings held with a proper quorum.  Yes No N/A  
 Date of Meetings: 1st qtr. 2/15/90, 2nd qtr. 5/4/90,  
 3rd qtr. 8/8/90, 4th qtr. \_\_\_\_\_



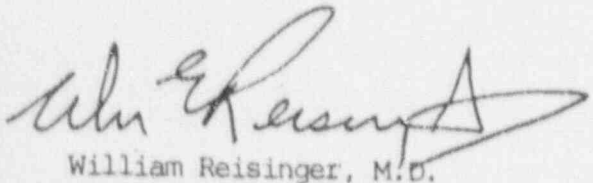
Miscellaneous (Continued)

- 1. Radioactive package receipt
  - (1) Visual check yes
  - (2) Package survey at 1 meter yes
  - (3) Surface survey yes
  - (4) Final source container contamination check yes
  - (5) Empty packages surveyed before disposal yes
- m. Lectures about radiation safety given to the following personnel:
  - (1) Clerical help in Nuclear Medicine Dept. yes
  - (2) Housekeeping personnel yes
  - (3) Nursing staff yes
  - (4) Transportation yes
  - (5) Security yes

1. Therapeutic

- a. Private room with private bathroom  Yes No N/A
- b. Patient room posted with "Caution Radioactive Material" sign  Yes No N/A
- c. Visiting time noted on the patient's chart  Yes No N/A
- d. Radiation safety instructions given to patient  Yes No N/A
- e. Nursing staff provided with monitoring devices  Yes No N/A
- f. Radiation safety nursing instructions provided to staff  Yes No N/A
- g. Areas surrounding the patient surveyed for radiation  Yes No N/A
- h. Thyroid burden measured for personnel involved in administration of doses.  Yes No  N/A
- i. Contamination check of linens prior to release  Yes No N/A
- j. Contamination check of room prior to release  Yes No N/A

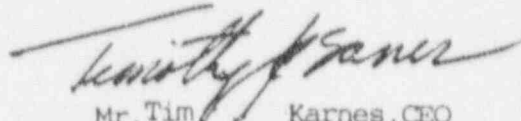
*\* only hyperthyroid patients are treated & less than 30 mCi of I-131*



William Reisinger, M.D.

Signature

Radiation Safety Officer



Mr. Tim Karnes, CEO

Signature

Hospital Administrator

YEARLY MANAGEMENT AUDIT SURVEY

HOSPITAL Mercy Hospital NRC LICENSE # 37-05272-02  
 ADDRESS 1020 Franklin St. Johnstown, PA. 15904 EXP. DATE 12/31/93  
 DATE OF SURVEY 9/19/90

RADIATION SAFETY OFFICER William Reisinger, M.D. STATE LICENSE # PA-8  
 ADMINISTRATOR Mr. Philip Dionne EXP. DATE 5/31/93  
Administrator  
 (Title)

1. Floor plan for the Nuclear Medicine Department available  Yes No N/A  
 Floor plan for the Nuclear Cardiology Dept. available  Yes No N/A
2. Are the following areas marked on the floor plan?
- a. Where isotopes are stored  Yes No N/A  
 b. Where radiopharmaceuticals are prepared (radiopharmacy)  Yes No N/A  
 c. Where patients are injected with radionuclides  Yes No N/A  
 d. Areas surveyed with a GM counter or with wipes  Yes No N/A

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_

3. Area Surveys

- a. Daily operational checks with survey meters.  Yes No N/A  
 b. (1) Daily survey with GM counter.  Yes No N/A  
 (2) Trigger levels for controlled and uncontrolled areas for GM survey.  Yes No N/A  
 c. (1) Weekly surveys, including wipe tests.  Yes No N/A  
 (2) Trigger levels for controlled and uncontrolled areas for wipe tests.  Yes No N/A  
 d. Room monitoring for ventilation studies every 6 months.  Yes No N/A  
 e. Xenon trap monitoring. Yes No  N/A

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_

\* Items marked with an asterisk are to be signed by the Radiation Safety Officer

Hospital  
Date

Mercy Hospital

9/19/90

Calibration of equipment

a. Voltage of dose calibrator

b. Daily calibration of dose calibrator against Co-57, Cs-137,  
source.

\* c. Linearity checks: 1st qtr. YES, 2nd qtr. YES,  
3rd qtr. YES, 4th qtr. \_\_\_\_\_

\* d. Accuracy Check: Last date 7/28/90

e. Geometrical Variation: Date 7/20/90

f. Plastic liner checked & inventory of sealed sources done every 3 months.  Yes No N/A

g. Sealed sources with activity greater than 100 uCi leak tested every 6 months.  Yes No N/A

h. Plastic liner of the dose calibrator checked routinely  Yes No N/A

i. Ambient radiation level measured around the sealed sources  Yes No N/A

j. Molybdenum contamination checked after each elution  Yes No N/A

k. GM survey meters  
(Dedicated check source sent during calibration)  Yes No N/A

	(1) Meter <u>G.M. MINI-MONITOR</u>	Last Calibrated <u>7/30/90</u>	Sensitivity <u>2K-CPS/SEC.</u>
Victoreen	(2) Meter <u>GM Counter #491</u>	Last Calibrated <u>Presently</u>	Sensitivity <u>1MR/Hr.</u>
	(3) Meter _____	Last Calibrated _____	Sensitivity _____
	(4) Meter _____	Last Calibrated _____	Sensitivity _____

Ionization Chambers

Victoreen	(1) Meter <u>Model #273</u>	Last Calibrated <u>3/1/90</u>	Sensitivity <u>25 mR/Rv</u>
	(2) Meter _____	Last Calibrated _____	Sensitivity _____

NOTE: Any audio attachments to the survey meters : yes

REMARKS: \_\_\_\_\_

5. Signs

a. Are the areas properly posted with "Caution Radioactive Material" signs?  Yes No N/A

b. Are the areas properly posted with "Caution Radiation Area" signs  Yes No N/A

c. Are the areas properly posted with "Caution Airborne Material" signs?  Yes No N/A

d. Are there "Notice to Employees" signs posted?  Yes No N/A

e. Up to date 10 CFR 19, 20, and 35 available and posted.  Yes No N/A

f. Title 25 Section 219 and 220 posted.  Yes No N/A

g. Sign prohibiting eating, drinking and smoking in the Nuclear Medicine Department.  Yes No N/A

Hospital  
Date

Mercy Hospital

9/19/90

Page 3

6. Waste Disposal

- a. Is the technician who orders radiopharmaceuticals aware of maximum possession limits?  Yes No N/A
- b. If isotopes are disposed of through the sewage system has anybody checked the safe limit?  Yes No N/A
- c. Inventory of radiopharmaceuticals done regularly? (Obtained from the radiopharmacy on a daily basis)  Yes No N/A
- d. Waste disposal of radiopharmaceuticals done regularly?  Yes No N/A
- e. Date of storage and disposal recorded  Yes No N/A
- f. Are the solids held for 10 half lives before disposal?  Yes No N/A
- g. Dose rate monitored during disposal and equal to background.  Yes No N/A
- h. All radiation labels removed or obliterated before disposal.  Yes No N/A

7. Miscellaneous

- a. Is there a procedure book available for all the procedures done in the department?  Yes No N/A
- b. Is the prescribed dose mentioned in the procedure book?  Yes No N/A
- c. Is the procedure book checked and signed by a medical physicist?  Yes No N/A
- d. Are the technicians familiar with the new diagnostic misadministration rules? Are they also familiar with the 10% misadministration variation for therapeutic doses.  Yes No N/A
- e. Is the decay of the standard sources done at regular intervals?  Yes No N/A
- f. Are the personnel being monitored with film badges and ring badges and all film badge records available?  Yes No N/A
- g. Do the technicians use syringe shields while handling radionuclides?  Yes No N/A
- h. Do the personnel wear lab coats?  Yes No N/A
- i. Are the misadministration reported to the NRC and/or state and discussed at the radiation safety committee meeting?  Yes No N/A
- j. Do the technologists check the dose calibrator and survey the areas on weekends on holidays or call?  Yes No N/A
- k. Are at least 4 quarterly radiation safety committee meetings held with a proper quorum.  
Date of Meetings: 1st qtr. 2/15/90, 2nd qtr. 5/4/90,  
3rd qtr. 8/8/90, 4th qtr. \_\_\_\_\_

Miscellaneous (Continued)

- 1. Radioactive package receipt
  - (1) Visual check yes
  - (2) Package survey at 1 meter yes
  - (3) Surface survey yes
  - (4) Final source container contamination check yes
  - (5) Empty packages surveyed before disposal yes
- m. Lectures about radiation safety given to the following personnel:
  - (1) Clerical help in Nuclear Medicine Dept. yes
  - (2) Housekeeping personnel yes
  - (3) Nursing staff yes
  - (4) Transportation yes
  - (5) Security yes

i. Therapeutic

- a. Private room with private bathroom  Yes No N/A
- b. Patient room posted with "Caution Radioactive Material" sign  Yes No N/A
- c. Visiting time noted on the patient's chart  Yes No N/A
- d. Radiation safety instructions given to patient  Yes No N/A
- e. Nursing staff provided with monitoring devices  Yes No N/A
- f. Radiation safety nursing instructions provided to staff  Yes No N/A
- g. Areas surrounding the patient surveyed for radiation  Yes No N/A
- h. Thyroid burden measured for personnel involved in administration of doses.  Yes No  N/A
- i. Contamination check of linens prior to release  Yes No N/A
- j. Contamination check of room prior to release  Yes No N/A

*\* only hyperthyroid patients are treated & less than 30 mCi of I-131*

William Reisinger, M.D.

Signature

Radiation Safety Officer

Mr. Tim Karnes, CEO

Signature

Hospital Administrator

YEARLY MANAGEMENT AUDIT SURVEY

HOSPITAL Mercy Hospital of Johnstown NRC LICENSE # 37-05272-02  
 ADDRESS 1020 Franklin St., Johnstown, Pa. EXP. DATE 12/31/93  
 DATE OF SURVEY 3/6/89

RADIATION SAFETY OFFICER Sam Krinsky, MD, Ph.D. STATE LICENSE # PA-8  
 ADMINISTRATOR Sr. Catherine McGearty, R.S.M. EXP. DATE 5/31/92  
 Interim \_\_\_\_\_  
 (Title)

1. Floor plan for the Nuclear Medicine Department available  Yes No N/A  
 Floor plan for the Nuclear Cardiology Dept. available  Yes No N/A
2. Are the following areas marked on the floor plan?
- \* a. Where isotopes are stored  Yes No N/A  
 b. Where radiopharmaceuticals are prepared (radiopharmacy)  Yes No N/A  
 c. Where patients are injected with radionuclides  Yes No N/A  
 d. Areas surveyed with a GM counter or with wipes  Yes No N/A

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_

3. Area Surveys
  - a. Are the areas surveyed regularly (weekly)?  Yes No N/A
  - b. When was the last survey performed? Date 3/3/89  Yes No N/A
  - c. Are the areas for generator elution, radiopharmaceutical preparation, and patient injection surveyed daily?  Yes No N/A
  - d. Do the technicians survey their hands and clothing before lunch and before they leave the department?  Yes No N/A
  - e. Any unusual survey results in the controlled and uncontrolled areas? Yes  No N/A
  - f. Is the charcoal surveyed for saturation with Xenon weekly? Yes No  N/A
  - g. Is the ventilation system checked quarterly,  Yes No N/A

NOTE: Does the survey show greater than 0.6 mR/hour in any uncontrolled area? No

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_

4. Calibration of equipment

- a. Dose calibrator (date of last calibration) 2/27/89  
Is it calibrated daily against Co-57 standard source?  Yes No N/A  
Calibrated weekly against CS-137-Ba-133-Co-60 sources?  Yes No N/A  
Voltage of the dose calibrator is checked every week.

b. Survey meters

Mini-Monitor -G.M. Counter 7/6/88 2 K - Counts/sec.  
(type) (last calibrated on) (maximum sensitivity)  
(full scale)

Victoreen G.M. Counter  
Model #491 5/11/88 1 MR/Hr. or 150 CPM.  
(type) (last calibrated on) (maximum sensitivity)  
(full scale)

Victoreen Ionization Chamber  
Model #273 3/1/89 25 MR/HR.  
(type) (last calibrated on) (maximum sensitivity)  
(full scale)

\_\_\_\_\_  
(type) (last calibrated on) (maximum sensitivity)  
(full scale)

\_\_\_\_\_  
(type) (last calibrated on) (maximum sensitivity)

- NOTE: Can one of the survey meters measure 0.1 mR/hr radiation level?  Yes No N/A  
Is there an audio attachment to one of the survey meters?  Yes No N/A  
Is the survey meter checked before use?  Yes No N/A

- c. Flood pictures of the gamma camera taken daily?  Yes No N/A  
Bar pattern of the gamma camera taken weekly?  Yes No N/A  
Calibration of other equipment As per physicist's recommendations and NCRP Report, where applicable.

5. Signs

- a. Are the areas properly posted with "Caution Radioactive Material" signs?  Yes No N/A  
b. Are the areas properly posted with "Caution Radiation Area" signs? Yes No  N/A  
c. Are the areas properly posted with "Caution Airborne Material" signs?  Yes No N/A  
d. Are there "Notice to Employees" signs posted?  Yes No N/A  
e. Do the employees know where 10 CFR 19 and 20 are available?  Yes No N/A

REMARKS:

6. Is the technician who orders radiopharmaceuticals aware of maximum possession limits?  Yes No N/A
- If isotopes are disposed of through the sewage system, has anybody checked the safe limit?  Yes No N/A
- Inventory of radiopharmaceuticals done regularly? (Obtained from the radiopharmacy on a daily basis)  Yes No N/A
- Waste disposal of radiopharmaceuticals done regularly?  Yes No N/A

REMARKS:

7. Miscellaneous

- Is there a sign prohibiting eating, drinking, and smoking in the Nuclear Medicine Department?  Yes No N/A
- Is there a procedure book available for all the procedures done in the department?  Yes No N/A
- Is the prescribed dose mentioned in the procedure book?  Yes No N/A
- Are the technicians familiar with the new diagnostic misadministration rules? They are also familiar with the 10% misadministration variation for therapeutic doses.  Yes No N/A
- Is the decay of the standard sources done at regular intervals?  Yes No N/A
- Are the sealed sources wipe tested every 6 months?  Yes No N/A
- Are the personnel being monitored with film badges and ring badges?  Yes No N/A
- Do the technicians use syringe shields while handling radionuclides?  Yes No N/A
- Do the personnel wear lab coats?  Yes No N/A
- Continuing Education for nuclear technicians  Yes No N/A
- Up-to-date 10 CFR 19 and 20  Yes No N/A

Sam Krinsky, M.D., Ph. D.

Louise Stump, R.N.

Radiation Safety Officer

*Sam Krinsky* MD, PhD  
3/6/89



YEARLY MANAGEMENT AUDIT SURVEY

HOSPITAL Mercy Hospital of Johnstown NRC LICENSE # 37-05272-02  
 ADDRESS 1020 Franklin St., Johnstown, Pa. EXP. DATE 12/31/93  
 DATE OF SURVEY 3/6/89

RADIATION SAFETY OFFICER Sam Krinsky, MD, Ph.D. STATE LICENSE # PA - 8  
 ADMINISTRATOR Sr. Catherine McGarity, R.S.M. EXP. DATE 5/31/92  
 Interim \_\_\_\_\_  
 (Title)

1. Floor plan for the Nuclear Medicine Department available  Yes No N/A  
 Floor plan for the Nuclear Cardiology Dept. available  Yes No N/A
2. Are the following areas marked on the floor plan?
- \* a. Where isotopes are stored  Yes No N/A  
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 d. Areas surveyed with a GM counter or with wipes  Yes No N/A

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_

3. Area Surveys

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 b. When was the last survey performed? Date 3/3/89  Yes No N/A  
 c. Are the areas for generator elution, radiopharmaceutical preparation, and patient injection surveyed daily?  Yes No N/A  
 d. Do the technicians survey their hands and clothing before lunch and before they leave the department?  Yes No N/A  
 e. Any unusual survey results in the controlled and uncontrolled areas? Yes  No N/A  
 f. Is the charcoal surveyed for saturation with Xenon weekly? Yes No  N/A  
 g. Is the ventilation system checked quarterly,  Yes No N/A

NOTE: Does the survey show greater than 0.6 mR/hour in any uncontrolled area? No

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_

4. Calibration of equipment

- a. Dose calibrator (date of last calibration) 2/27/89  
 Is it calibrated daily against Co-57 standard source  Yes No N/A  
 Calibrated weekly against CS-137-Ba-133-Co-60 sources?  Yes No N/A  
 Voltage of the dose calibrator is checked every week.

b. Survey meters

Mini-Monitor -G.M. Counter 7/6/88 2 K - Counts/sec.  
 (type) (last calibrated on) (maximum sensitivity)  
 (full scale)

Victoreen G.M. Counter  
 Model #491 5/11/88 1 MR/Hr. or 150 CPM.  
 (type) (last calibrated on) (maximum sensitivity)  
 (full scale)

Victoreen Ionization Chamber  
 Model #273 3/1/89 25 MR/HR.  
 (type) (last calibrated on) (maximum sensitivity)  
 (full scale)

\_\_\_\_\_  
 (type) (last calibrated on) (maximum sensitivity)  
 (full scale)

\_\_\_\_\_  
 (type) (last calibrated on) (maximum sensitivity)

- NOTE: Can one of the survey meters measure 0.1 mR/hr radiation level?  Yes No N/A  
 Is there an audio attachment to one of the survey meters?  Yes No N/A  
 Is the survey meter checked before use?  Yes No N/A

- c. Flood pictures of the gamma camera taken daily?  Yes No N/A  
 Bar pattern of the gamma camera taken weekly?  Yes No N/A  
 Calibration of other equipment As per physicist's recommendations and NCRP Report, where applicable.

5. Signs

- a. Are the areas properly posted with "Caution Radioactive Material" signs?  Yes No N/A  
 b. Are the areas properly posted with "Caution Radiation Area" signs? Yes No  N/A  
 c. Are the areas properly posted with "Caution Airborne Material" signs?  Yes No N/A  
 d. Are there "Notice to Employees" signs posted?  Yes No N/A  
 e. Do the employees know where 10 CFR 19 and 20 are available?  Yes No N/A

REMARKS:

6. Is the technician who orders radiopharmaceuticals aware of maximum possession limits?  Yes No N/A
- If isotopes are disposed of through the sewage system, has anybody checked the safe limit?  Yes No N/A
- Inventory of radiopharmaceuticals done regularly? (Obtained from the radiopharmacy on a daily basis)  Yes No N/A
- Waste disposal of radiopharmaceuticals done regularly?  Yes No N/A

REMARKS:

7. Miscellaneous

- Is there a sign prohibiting eating, drinking, and smoking in the Nuclear Medicine Department?  Yes No N/A
- Is there a procedure book available for all the procedures done in the department?  Yes No N/A
- Is the prescribed dose mentioned in the procedure book?  Yes No N/A
- Are the technicians familiar with the new diagnostic misadministration rules? They are also familiar with the 10% misadministration variation for therapeutic doses.  Yes No N/A
- Is the decay of the standard sources done at regular intervals?  Yes No N/A
- Are the sealed sources wipe tested every 6 months?  Yes No N/A
- Are the personnel being monitored with film badges and ring badges?  Yes No N/A
- Do the technicians use syringe shields while handling radionuclides?  Yes No N/A
- Do the personnel wear lab coats?  Yes No N/A
- Continuing Education for nuclear technicians  Yes No N/A
- Up-to-date 10 CFR 19 and 20  Yes No N/A

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Louise Stump, R.N.

Radiation Safety Officer

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*3/6/89*