

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.

9102060055 910125 REG1 LIC30 37-05272-02 PDR TO: Mohamed M. Shanbaky, Chief -2- DATE: November 14, 1990 Nuclear Materials Safety Section A Division of Radiation Safety and Safeguards Nuclear Regulatory Commission, Region 1

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,

Junty Fame

Timothy J. Karnes Senior Nice 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 does for the period 5/10/90 then 5/9/90. (See Ih file bedge report for 1h pered 7/10/90 then 8/9/90)

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| 14 | 00081 | BRAWLEY BETTY | 188222908 | GI P | 54 54 |
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| | 00100 | WALTERS T | | 1 11 | |

Estimated does for the period 5/10/40 then 6/9/90. (See the film bedge report for the period 7/10/90 then 8/9/90/

| | r: 1 | FUR EAFUJURE FU | | 11- | |
|----|-------|---|-----------|-------|-------------|
| | 00000 | CONTROL | | 62 | Sup Shallow |
| | 00000 | TLD CONTROL | | | |
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| 10 | 00024 | STUMPO L | | UB | - 10 |
| | 00073 | PARTSCH DOLORES | 180286927 | 64 | M M |
| | 00077 | SOJAK ELAINE | 173464624 | Ga . | 11 |
| 9 | 00081 | DRAWLEY BETTY | 188222908 | GA | 14 14 |
| | 00081 | BRAWLEY DETTY | 188222908 | UB | 54 54 |
| | 00092 | VERBANO A L | 185268943 | G1 P | |
| | 00092 | VERBANO A L | 185268943 | Up | |
| | 00093 | KRINSKY S MD | 096343162 | GA | 2,1, |
| | 00093 | KRINSKY S HD | 096340162 | UB | |
| | 00100 | WALTERS T | 208382348 | GI | 2 2. |
| | 1615 | Last a second | 1 | 1 1 1 | |

| | SPIT | | Mercy Hos | | NRC LICENSE # | 37-0527 | 2+02 | |
|----|----------------|---------------------|----------------------------------|---|--|-------------------|----------------|-----------------------------|
| | DRESS TE OI | S SURV | | Klin St.Johnstown | 1, PA. 1590EXP. DATE | 12/31 | /93 | ter contra de actuaria |
| | | ION SA | FETY OFFICER | William Reisinge Mr. Philip Dionn | EXP. DATE | PA-8 | 93 | 111 II II II II II II II II |
| | | | (716 | Administrator le) | | | | |
| 1. | Floo | or pla or pla | in for the Nuc in for the Nuc | lear Medicine lear Cardiolog | Department available y Dept. available | Yes | No No | N/A N/A |
| 2. | Are | the f | ollowing area | is marked on th | e floor plan? | | | |
| | | Where | patients are | euticals are p | repared (radiopharmacy radionuclides or with wipes | Yes Yes Yes | No No No | N/A N/A N/A |
| | REM | ARKS : | | | n Mil Martin Karala (Milan Milan) (Milan Salah Sala Generatarak sebagai kerangkan sebagai kerangkan sebagai kerangkan sebagai kerangkan sebagai kerangkan sebagai k | | | |
| 3. | Area | a Surv | /eys | | | | | |
| | a. b. | Daily (1) (2) | Daily survey Trigger level | checks with su with GM counte ls for controll areas for GM s | er. ed and | Yes Yes | No No No | N/A N/A N/A |
| | с. | $\binom{1}{2}$ | Weekly survey Trigger level | ys, including w ls for controll | vipe tests. .ed and | Yes | No No | N/A N/A |
| | d. | | | areas for wipe or ventillation | studies every | (Yes) | No | N/A |
| | е. | | n trap monitor | ring. | | Yes | No | N/A |
| | REM | ARKS : | | | | | | |
| | | | | | an and the set of the | | | |

* Items marked with an asterisk are to be signed by the Radiation Safety Off're

| Hospital | Mercy Hospital | Page | 2 |
|------------|---|-------------------------------------|------------------|
| Date | 9/19/90 | | |
| | ibration of equipment Voltage of dose calibrator Daily calibration of dose calibrator against, source | , <u>cs-/37</u> , | , |
| * c. | Linearity checks: 1st qtr. YES , 2nd qtr. YES | ······ * | |
| * d. e. | source. Linearity checks: 1st qtr. YES , 2nd qtr. YES 3rd qtr. YES , 4th qtr Accuracy Check: Last date 7/28/90 Geometrical Variation: Date 7/20/96 Plastic liner checked & inventory of sealed sources | (Yes) | No N/A |
| *. | done every 3 months. | | |
| g . | Sealed sources with activity greater than 100 uCi leak tested every 6 months. | (Yes) | No N/A |
| h. i. | Plastic liner of the dose calibrator checked routine: Ambient radiation level measured around the sealed | ly Yes Yes | No N/A No N/A |
| 1. | sources Molybdenum contamination checked after each elution | (Yes) | No N/A |
| k. | CM survey meters | ensitivit; | NOK-SEC. |
| Victoreen | (2) Meter <u>GM Counter#491</u> Last Calibrated <u>Presently</u> S (3) Meter Last Calibrated S | ensitivit ensitivit ensitivit | y 1MR7Hr. |
| Victoreen | Ionization Chambers (1) Meter Model #273Last Calibrated 3/1/90S(2) MeterLast CalibratedS | ensitivit ensitivit | y 25 mR/fx |
| NOTE: A | Any audio attachments to the survey meters ; yes , | | |
| RE | MARKS: | | |
| 5. Si | gns | | |
| a. | Are the areas properly posted with "Caution Radioac Material" signs? | (165 | No N/A |
| þ. | Are the areas properly posted with "Caution Radiati | CIES | NO N/A |
| ¢, | the second and a second with "Coultion Airborr | Yes) | No N/A |
| d. | Are there "Notice to Employees" signs posted? | ted. Yes | |
| e. f. | Title 25 Section 219 and 220 post | ed. (Yes) | |
| g . | Sign prohibiting eating, drinking and smoking in c. Nuclear Medicine Department. | | |

| Hospital | Mercy Hospital |
|----------|----------------|
| Date | 9/19/90 |

6. Waste Disposal

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7.

| a. | Is the technician who orders radiopharmaceuticals | Yes | No | N/A |
|----------|--|------------------------------|-----|-------|
| ь. | If isotopes are disposed of through the second | | | |
| с. | STOLEM HAS ANVOOD CHECKAR FRA FAFA 11-1-1 | Yes | No | N/A |
| | (Obtained from the radiopharmaceuticals done regularly? | (Yes) | No | N/A |
| d. e. | A A A A A A A A A A A A A A A A A A A | Tes | No | N/A |
| £. | Are the solids held for 10 helf lives before it | Ves | No | N/A |
| g. | Dose rate monitored during disposal and equal to background. | (les) | | |
| h. | All radiation labels removed or obliterated | Vac | | |
| | before disposal. | Yes | NO | N/A |
| Mis | cellaneous | | | |
| а. | Is there a procedure back starts | | | |
| | Is there a procedure book available for all the procedures done in the department? | Yes | No | N/A |
| b. c. | is the prescribed dose mentioned in the president is | Tes | No | N/A |
| | medical physicist? | (Yes) | No | N/A |
| d. | Are the technicians familiar with the new dimension | des | No | N/A |
| | misadministration rules? Are they also familiar with the 10% misadministration variation for therapeutic doses | | | |
| е. | Is the decay of the standard sources done at regular | | No | N/A |
| £. | Are the personnel being monitored with file being | | | |
| g, | | (Yes) | No | N/A |
| | radionuclides? | (Yes) | No | N/A |
| h. 1. | Do the personnel wear lab coats? | Yes | No | N/A |
| * • | Are the misadministration reported to the NRC and/or state and discussed at the radiation safety committee | and the second second second | No | N/A |
| | the set of the back of the bac | | | |
| 1. | Do the technologists check the dose calibrator and survey the areas on weekends on holidays or call? | Yes | No | N/A |
| k. | ALC AL LEASE 4 QUARTERIV rediction cofety and the | (Yes) | No | N/A |
| | abserings herd with a proper quorum. | 100 | 110 | 14/15 |
| | Date of Meetings: 1st qtr. 2/15/90 3rd qtr. 8/8/90, 2nd qtr. 5/4/90 4th qtr. | , | | |
| | | | | |

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| lospita ite | 1MERCY HOSPITAL | Page | 4 | |
|----------------------|--|--------------------------|----------------|--------------|
| Mi | scellaneous (Continued) | | | |
| 1. m. | Visual check <u>915</u> Package survey at 1 meter <u>915</u> Surface survey <u>915</u> Final source container contamination check <u>915</u> Empty packages surveyed before disposal <u>915</u> Lectures about radiation safety given to the following pe Clerical help in Nuclear Medicine Dept | rsonne | 1: | |
|). Th | (3) Nursing staff <u>415</u> (4) Transportation <u>415</u> (5) Security <u>415</u> | | | |
| · . <u></u> | erapeutic | | | |
| a. b. | Private room with private bathroom Patient room posted with "Caution Radioactive Material" sign | Yes | No No | N/A N/A |
| c. d. e. f. | Visiting time noted on the patient's chart Radiation safety instructions given to patient Nursing staff provided with monitoring devices Radiation safety nursing instructions provided to staff | Yes Yes Yes Yes | No No No | N/A N/A |
| g. h. | administration of doses. | Yes | No No | N/A (N/A) |
| i. j. | Contamination check of linens prior to release | Yes | No No | |
| | + only hyperthyroid patients are trusted & len than 30 mG of 1-131 | | | |

William Reisinger, M.O.

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Signature Radiation Safety Officer

Tuniothe & Sance Mr.Tim/ Karnes, CEO

Hospital Administrator

8.1.4

| HOSPITAL Mercy Hospital NRC LICENSE // | 37-0527 | 2-02 | |
|--|---------------|----------------|--|
| ADDRESS 1020 Franklin St. Johnstown, PA. 159 EXP. DATE | 12/31 | /93 | er oliveri a pitoissa O on oliveri singi siin |
| RADIATION SAFETY OFFICER William Reisinger, M.D.STATE LICENSE # ADMINISTRATOR Mr. Philip Dionne EXP. DATE | PA-8 5/317 | 93 | ala ang sana ang san Sana ang sana |
| (Title) | | | |
| 1. Floor plan for the Nuclear Medicine Department available Floor plan for the Nuclear Cardiology Dept. available | Yes | No No | N/A N/A |
| 2. Are the following areas marked on the floor plan? | | | |
| a. Where isotopes are stored b. Where radiopharmaceuticals are prepared (radiopharmacy) c. Where patients are injected with radionuclides d. Areas surveyed with a GM counter or with wipes | Yes | No No No | N/A N/A N/A N/A |
| ' REMARKS : | | - | |
| 3. Area Surveys | | | |
| | - | | |
| a. Daily operational checks with survey meters. b. (1) Daily survey with GM counter. (2) Trigger levels for controlled and | Yes Yes | No No No | N/A N/A N/A |
| uncontrolled areas for GM survey. c. (1) Weekly surveys, including wipe tests. (2) Trigger levels for controlled and | Yes | No No | N/A N/A |
| uncontrolled areas for wipe tests. d. Room monitoring for ventillation studies every | (Yes) | No | N/A |
| 6 months. e. Xenon trap monitoring. | Yes | No | N/A |
| REMARKS : | | | _ |
| | | 6-1- 6-1-1 | - |

* Items marked with an asterisk are to be signed by the Radiation Safety Off're

| | ltal | ilercy Hospital Page | 2 | |
|------------------|--|---|----------------------------------|---------------------------------|
| Date | | 9/19/90 | | |
| | | | | |
| Þ | Cali | bration of equipment | | |
| | | Voltage of dose calibrator | | |
| | ь. | Daily calibration of dose calibrator against, C5-/37 | ., | |
| * | c. | VDC VDC | | |
| * | d. | Accuracy Check: Last date 7/28/90 | | |
| | e. | Geometrical Variation: Date 7/20/90 | | |
| | Ι. | Plastic liner checked & inventory of sealed sources Yes | No No | N/A |
| | g. | Sealed sources with activity greater than 100 uCi (Yes) | No | N/A |
| | | leak tested every 6 months. | | |
| | h. | Plastic liner of the dose calibrator checked routinely (Yes |) No | N/A |
| | 1. | Ambient radiation level measured around the sealed (Tes |) No | N/A |
| | 1. | Molybdenum contamination checked after each elution (Yes | No | N/A |
| | | GM survey metars | NO | 11/11 |
| | | (Dedicated check source sent during calibration) des | Ng. | N/A |
| | | (1) HELEL MONITOR LASE CALLOLATED //30/00 SENSICIVI | ty 2K | sec. |
| Victo: | reen | (2) Meter CM Counter#491 Last Calibrated Presently Sensitivi (3) Meter Last Calibrated Sensitivi | | hr. |
| | | (3) Meter Last Calibrated Sensitivi (4) Meter Last Calibrated Sensitivi | | |
| | | | | |
| | | Ionization Chambers | | |
| ictore | en | (1) Meter Model #273 Last Calibrated 3/1/90 Sensitivi | ty 25 | mR/. fr |
| | | (2) Meter Last Calibrated Sensitivi | ty | |
| NOTE | A | ny audio attachments to the survey meters : yes : | | |
| a 7 far de Rad I | | | | |
| | | ing addie accounting to the barrey meters , just | | |
| | | 0 | | |
| | | ARKS: | | _ |
| | | 0 | | |
| 5. | | ARKS : | | |
| | REM | ARKS: | | - |
| | REM Sig | ARKS: ns Are the areas properly posted with "Caution Radioactive Material" signs? | D No | - N/# |
| | REM. Sig | ARKS: ns Are the areas properly posted with "Caution Radioactive Material" signs? Are the areas properly posted with "Caution Radiation | _ | |
| | REM Sig | ARKS: Are the areas properly posted with "Caution Radioactive Material" signs? Are the areas properly posted with "Caution Radiation Area" signs Are the areas properly posted with "Caution Airborne | D No | N/A |
| | REM Sig a. b. | ARKS: Are the areas properly posted with "Caution Radioactive Material" signs? Are the areas properly posted with "Caution Radiation Area" signs Are the areas properly posted with "Caution Airborne Material" signs? Yes | D No | N/# N/# |
| | REM Sig a. b. c. d. | ARKS: Are the areas properly posted with "Caution Radioactive Material" signs? Are the areas properly posted with "Caution Radiation Area" signs Are the areas properly posted with "Caution Airborne Material" signs? Are there "Notice to Employees" signs posted? Yes | No No No | N/# N/# N/# |
| | REM Sig a. b. c. d. e. | ARKS: Are the areas properly posted with "Caution Radioactive Material" signs? Are the areas properly posted with "Caution Radiation Area" signs Are the areas properly posted with "Caution Airborne Material" signs? Are there "Notice to Employees" signs posted? Up to date 10 CFR 19, 20, and 35 available and posted. | No No No | N/# N/# N/# N/# N/# |
| | REM Sig a. b. c. d. | ARKS: Are the areas properly posted with "Caution Radioactive Material" signs? Are the areas properly posted with "Caution Radiation Area" signs Are the areas properly posted with "Caution Airborne Material" signs? Are there "Notice to Employees" signs posted? Yes | No No No No No No | N/# N/# N/# |

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| Hospital | Mercy Hospital |
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6. Waste Disposal

10.00

7.

| | а. | Is the technician who orders radiopharmaceuticals | | | |
|---|------|---|--------|----------|------------|
| | | andre of martinum Dossession limiter? | Yes | No | N/A |
| | Ь. | system has anybody checked the safe light? | Yes | No | N/A |
| | с. | Inventory of radiopharmaceuticals done regularly? (Obtained from the radiopharmacy on a daily basis) | (Yes) | No | N/A |
| | d. | " " " " " " " " " " " " " " " " " " " | - | | |
| | e. | NAME OF OFOTSEE HILL UIEDVEDI POVONNUM | Yes | No | N/A |
| | f. | ALE LINE SOLIDS held for 10 half lives before di | Tes | | N/A N/A |
| P | g. | Dose rate menicored during disposal and equal to background. | (Yes) | | |
| 1 | h. | All radiation labels removed or obliterated | | | |
| | | before disposel | Yes | No | N/A |
| | | | | | |
| 1 | misc | cellaneous | | | |
| | a. | Is there a procedure book qualitable for all | | | |
| | | Is there a procedure book available for all the procedures done in the department? | Yes | No | N/A |
| | ь. | is the prescribed dose mentioned in the presedue to the | 0 | | |
| 1 | с. | a cite procedure book checked and signed by a | Yes | No No | N/A N/A |
| | | montogr buysicise: | 100 | NO | N/A |
| | 1.00 | Are the technicians familiar with the new diagnostic | (les) | No | N/A |
| | | misadministration rules? Are they also familiar with the 10% misadministration variation for therapeutic doses | | | |
| 1 | е. | and a the standard sources done of regular | | 1.10 | 27/4 |
| | c | | (les) | 140 | N/A |
| | £. | Are the personnel being monitored with film badges and | Yes | No | N/A |
| 5 | g . | THE PAULES PHU ALL TILM DADDA FACARda Available | | | |
| | | Do the technicians use syringe shields while handling radionuclides? | (Yes) | No | N/A |
| | n. | Do the personnel wear lab coats? | (Val) | ÷ | 27/4 |
| | i. | Are the misadministration reported to the NDC and/an | Yes | No | N/A N/A |
| | | state and discussed at the radiation safety committee | | | u/A |
| 1 | j. | move sais | - | | |
| | | Do the technologists check the dose calibrator and survey the areas on weekends on holidays or call? | Yes | No | N/A |
| ł | ς. | Are at least 4 quarterly radiation sofory committee | (VIII) | | |
| | | meetings herd with a proper quorum. | (Yes) | No | N/A |
| | | Date of Meetings: 1st qtr. 2/15/90 . 2nd atr. 5/4/90 | | | |
| | | 3rd qtr. 8/8/90, 4th qtr. | | | |
| | | | | | |

Page 3

| lospital | MERCY HOSPITAL | |
|----------|-----------------------------|-----------------------|
| ite | 9/19/90 | manal contraction and |
| Mis | cellaneous (Continued) | |
| 1. | Radioactive package receipt | |

- Package survey at 1 meter us
- (3)Surface survey mis
- (4) Final source container contamination check 445 (5) Empty packages surveyed before disposal
- (5) Empty packages surveyed before disposal <u>115</u> Lectures about radiation safety given to the following personnel:
 - Clerical help in Nuclear Medicine Dept. 435
 Housekeeping personnel 435
 - Housekeeping personnel 415 Nursing staff 415
 - (3)
 - (4) Transportation 415
 (5) Security 415

Therapeutic

m.

1.

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

* only hyperthyroid patients are treated & len than 30 mG of I-131

William Reisinger, M.D. Signature

Radiation Safety Officer

temother france Mr. Tim/ Karnes, CEO

Vignature Hospital Administrator

Page 4

1 4 4 4

| ADM, | IATION SAFETY OFFICER Sam Krinsy, MD. Ph. D. STATE LICENSE # INISTRATOR Sr. Catherine MnGroenty, R.S.M. EXP. DATE 5/ | PA. 31/92 | - 8 | |
|------|---|--------------------------|----------------|--------------------------|
| | (Title) | | | |
| 1. | Floor plan for the Nuclear Medicine Department available Floor plan for the Nuclear Cardiology Dept. available | Yes | No No | N/A N/A |
| 2. | Are the following areas marked on the floor plan? | | | |
| R | a. Where isotopes are stored b. Where radiopharmaceuticals are prepared (radiopharmacy) c. Where patients are injected with radionuclides d. Areas surveyed with a GM counter or with wipes | Yes Yes | No No No | N/A N/A N/A N/A |
| | | | | |
| | REMARKS: | | | |
| | REMARKS: | | | |
| 3. | REMARKS: | | | |
| 3. | Area Surveys a. Are the areas surveyed regularly (weekly)? b. When was the last survey performed? Date <u>3/3/89</u> c. Are the areas for generator elution, radiopharmaceutica | Yes Yes | No | N/А А\И |
| 3. | Area Surveys a. Are the areas surveyed regularly (weekly)? b. When was the last survey performed? Date <u>3/3/89</u> c. Are the areas for generator elution, radiopharmaceutica preparation, and patient injection surveyed daily? d. Do the technicians survey their hands and clothing | Yes) Yes | No No | N/A N/A |
| 3. | Area Surveys a. Are the areas surveyed regularly (weekly)? b. When was the last survey performed? Date <u>3/3/89</u> c. Are the areas for generator elution, radiopharmaceutica preparation, and patient injection surveyed daily? d. Do the technicians survey their hands and clothing before lunch and before they leave the department? e. Any unusual survey results in the controlled and | Yes Yes Yes | No No | А/И А/И А/И |
| 3. | Area Surveys a. Are the areas surveyed regularly (weekly)? b. When was the last survey performed? Date <u>3/3/89</u> c. Are the areas for generator elution, radiopharmaceutica preparation, and patient injection surveyed daily? d. Do the technicians survey their hands and clothing before lunch and before they leave the department? e. Any unusual survey results in the controlled and uncontrolled areas? f. Is the charcoal surveyed for saturation with Xenon | Yes Yes Yes Yes | No No No | N/A N/A N/A N/A |
| 3. | Area Surveys a. Are the areas surveyed regularly (weekly)? b. When was the last survey performed? Date <u>3/3/89</u> c. Are the areas for generator elution, radiopharmaceutica preparation, and patient injection surveyed daily? d. Do the technicians survey their hands and clothing before lunch and before they leave the department? e. Any unusual survey results in the controlled and uncontrolled areas? | Yes Yes Yes | No No | А/И А/И А/И |

| Hospital Date | Mercy Hospital of Johnsto 3/6/89 | O | Page 2 |
|------------------|--|--|---------------------------------------|
| | Calibrated weekly again | of last calibration) egainst Co-57 standard nst CS-137-Ba-133- ^{CC} Bod librator is checked even | rces? (Yes) No N/A |
| b. | Survey meters | | |
| | Mini-Monitor -G.M. Cou | nter 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 C Model #273 . | hamber 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: | radiation level? | meters measure 0.1 mR/h chment to one of the su | (Yes) No N/A |
| | Is the survey meter ch | ecked before use? | Yes No N/A |
| c. | Bar pattern of the gam | gamma camera taken dail ma camera taken weekly? quipment <u>As per physic</u> and NCRP Repo | (Yes) No N/A |
| | | | |
| 5. Sig a. | Are the areas properly Material" signs? | | (Yes) No N/A |
| b. | Area" signs | posted with "Caution R | adiation Yes No (N/A |
| c. d. | Are the arias properly Meterial" signs? Are there "Notice to E | posted with "Caution A mployees" signs posted? | (Yes) No N/A |
| Ρ. | Do the employees know available? | where 10 CFR 19 and 20 | are (Yes) No N/A |

REMARKS :

| Hospital | Mercy | Hospital | of | Johnstown |
|----------|-------|----------|----|-----------|
| Date | | | | |

6. Is the technician who orders radiopharmaceuticals aware of maximum possession limits?

If isotopes are disposed of through the sewage system, has anybody checked the safe limit?

Inventory of radiopharmaceuticals done regularly? (Obtained from the radiopharmacy on a daily basis)

Waste disposal of radiopharmaceuticals done regularly?

REMARKS :

18

7. Miscellaneous

| Is there a sign prohibiting eating, drinking, and smokin in the Nuclear Medicine Department? | g Yes No N/A |
|---|--------------|
| Is there a procedure book available for all the procedur done in the department? | Yes No N/A |
| Is the prescribed dose ment. Ded in the procedure book? | Yeb No N/A |
| Are the technicians familiar with the new diagnostic mis administration rules? They are also familiar with the 1 misadministration variation for therapeutic doses. | |
| 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? | Yeb No N/A |
| Do the personnel wear lab coats? | Yes No N/A |
| Continuing Education for nuclear technicians | (YEB) NO N/A |
| Up-to-date 10 CFR 19 and 20 | (Yes) NO N/A |
| Sam Krinsky, M.D., Ph. D. Louise Stur | npo, R.N. |

Radiation Safety Offices MD, PhD Gala Writes 346/89 Page 3

(Yes) No N/A

(Yes) No N/A

N/A

N/A

Yes) No

(Yes) No

1 4 14 1

| RADI | LATION SAFETY OFFICEK Sam Krinsy, MD. Ph.D.STATE LICENSE # | | | |
|------|---|---|----------------------------|---------------------------------|
| ADM) | INTERPATOR OF ONLINE LASS | PA 31/92 | - 8 | |
| | (Title) | | | |
| 1. | Floor plan for the Nuclear Medicine Department available | (Yes) | No | N '4 |
| | 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) | | No | N/A |
| | c. Where patients are injected with radionuclides d. Areas surveyed with a GM counter or with wipes | (Yes) | No | N/A |
| | d. Areas surveyed with a GM counter or with wipes | (Yes) | No | N/A |
| | D DWAD FC. | (Yes) | No | N/A |
| | | (Yes) | No | N/A |
| | D DWAD FC. | (Yes) | N0 | N/A |
| 3. | D DWAD FC. | Yes | N0 | N/A |
| 3. | Area Surveys a. Are the areas surveyed regularly (weekly)? | Yes | No | N/A |
| 3. | Area Surveys a. Are the areas surveyed regularly (weekly)? b. When was the last survey performed? Date 3/3/89 | Yes | ***** | |
| 3. | Area Surveys a. Are the areas surveyed regularly (weekly)? b. When was the last survey performed? Date <u>3/3/89</u> c. Are the areas for generator elution, radiopharmaceutica | Yes Yes | No | N/# N/# |
| з. | <pre>REMARKS: Area Surveys a. Are the areas surveyed regularly (weekly)? b. When was the last survey performed? Date <u>3/3/89</u> c. Are the areas for generator elution, radiopharmaceutica preparation, and patient injection surveyed daily? d. Do the technicians survey their hands and clothing</pre> | Yes | No | N/A |
| з. | <pre>REMARKS: Area Surveys a. Are the areas surveyed regularly (weekly)? b. When was the last survey performed? Date 3/3/89 c. Are the areas for generator elution, radiopharmaceutica preparation, and patient injection surveyed daily? d. Do the technicians survey their hands and clothing before lunch and before they leave the department?</pre> | Yes Yes | No | N/# N/# |
| 3. | <pre>REMARKS: Area Surveys a. Are the areas surveyed regularly (weekly)? b. When was the last survey performed? Date <u>3/3/89</u> c. Are the areas for generator elution, radiopharmaceutica preparation, and patient injection surveyed daily? d. Do the technicians survey their hands and clothing before lunch and before they leave the department? e. Any unusual survey results in the controlled and</pre> | Yes Yes Yes Yes Yes | No No No | N/# N/# N/# N/# |
| 3. | <pre>REMARKS: Area Surveys a. Are the areas surveyed regularly (weekly)? b. When was the last survey performed? Date <u>3/3/89</u> c. Are the areas for generator elution, radiopharmaceutica preparation, and patient injection surveyed daily? d. Do the technicians survey their hands and clothing before lunch and before they leave the department? e. Any unusual survey results in the controlled and uncontrolled areas?</pre> | Yes Yes Yes | No No No | N/A N/A N/A |
| 3. | <pre>REMARKS: Area Surveys a. Are the areas surveyed regularly (weekly)? b. When was the last survey performed? Date <u>3/3/89</u> c. Are the areas for generator elution, radiopharmaceutica preparation, and patient injection surveyed daily? d. Do the technicians survey their hands and clothing before lunch and before they leave the department? e. Any unusual survey results in the controlled and uncontrolled areas? f. Is the charcoal surveyed for saturation with Xenon weekly?</pre> | Yes Yes Yes Yes Yes Yes Yes | No No No No No | N/A N/A N/A N/A N/A |
| 3. | <pre>Area Surveys a. Are the areas surveyed regularly (weekly)? b. When was the last survey performed? Date 3/3/89 c. Are the areas for generator elution, radiopharmaceutica preparation, and patient injection surveyed daily? d. Do the technicians survey their hands and clothing before lunch and before they leave the department? e. Any unusual survey results in the controlled and uncontrolled areas? f. Is the charcoal surveyed for saturation with Xenon</pre> | Yes Yes Yes Yes Yes Yes Yes | No No No No | N/A N/A N/A N/A N/A |

| Date | | Mercy Hospital of Johnston 3/6/89 | ×0 | | | Pa | ge 2 | |
|------|----------|--|--------------------------------------|------------------------------|--------------------|-----------------------|-------|----------------|
| | 0.1 | (hand an at surdament | | | | | | |
| 4. | 6. | ibration of equipment Dose calibrator (date o Is it calibrated daily Calibrated weekly again Voltage of the dose cal | against st CS-1 | t Co-57 star .37-Ba-133-C | odard sources | rce <u>Ye</u> ? Ye | 100 | |
| | b. | Survey meters | | | | | | |
| | | Mini-Monitor -G.M. Cour | ter | 7/6/88 | | 2 K - 1 | Count | s/sec. |
| | | (type) | and the set of the second set of the | calibrated | on) | (maximum s (full | ensit | tivity) |
| | | Victoreen G.M. Counter Model #491 | | 5/11/88 | | 1 MR/H | r.or | 150 CPM. |
| | | (type) | (last | calibrated | on) | (maximum s (full | | |
| | | Victoreen Ionization Ch Model #273 | amber | 3/1/89 | | 25 MR | /HR. | |
| | | (type) | (last | calibrated | on) | (maximum s (full | | |
| | | (type) | (lest | calibrated | on) | (maximum s (ful) | | |
| | | (type) | (last | calibrated | (10 | (maximum s | ensi | tivity) |
| NOTE | 81 | Can one of the survey m radiation level? Is there an audio attac | | | | Cre | B N | o n/a |
| | | meters? Is the survey meter che | | | ne burvey | CYE | B N | |
| | c. | Flood pictures of the g Bar pattern of the gamm Calibration of other eq | a came | ra taken we t As per p | ekly? hysicist' | Te | | o N/A |
| 5. | Sig | 1.8 | | | | | | |
| | 8. | Are the areas properly Material" signs? | | | | (Ye | B) N | o N/A |
| | b. | Are the areas properly Area" signs Are the areas properly | | | | Ye | ев N | o N/A |
| | c. d. | Material" signs? Are there "Notice to En | Casher | | | | R N | o N/A o N/A |
| | | Do the employees know w available? | | | | C | ea) N | |
| | | | | | | | | |

REMARKS:

| Hospital Mercy Hospital of Johnstown Date 3/6/89 | Page 3 | |
|---|----------|-----|
| 6. Is the technician who orders radiopharmaceuticals aware of maximum possession limits? | Yes No | N/A |
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| Inventory of radiopharmaceuticals done regularly? (Obtained from the radiopharmacy on a daily basis) | Yeb 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? | YEB NO N/A |
|--|--------------|
| Is there a procedure book available for all the procedures done in the department? | (Yeb) NO N/A |
| Is the prescribed dose mentioned in the procedure book? | (Yeb) No N/A |
| Are the technicians familiar with the new diagnostic mis- administration rules? They are also familiar with the 10% misadministration variation for therapeutic doses. | Yeb 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? | Yeb No N/A |
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| Do the personnel wear lab coats? | YED NO N/A |
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| Sam Krinsky, M.D., Ph. D. Louise Stumpo | , R.N. |

Radiation Safety Offices MD, PhD Glue Willister 36/89