Brown County General Hospital

425 Home Street
Georgetown, Ohio 45121 • (513) 378-6121

Log Jan 13
Remitter
Check No. FEE EXEMPT
Amount
Fee Category Ex 170.11(a)(9)
Type of Fee
Date Check Rec'd.
Date Completed 1/27/87
By:

'87 JAN 27

'86 NOV 24 AIO:40

November 17, 1986

US Nuclear Regulatory Commission
Region III,
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Sirs:

Brown County General Hospital is currently undergoing a renovation project.

We request a change in the location of our Nuclear Medicine Room, including changing of the delivery designation for isotopes.

Our 10CFR only includes parts 2, 30, 40, 50, 51, 61, 70, 72, and 110.

To obtain the appropriate amendment for these changes, we need to receive 10CFR Part 170.

Please send us the appropriate amendment needed for the renovation.

The hospital is exempt from the fee because of it being a county hospital.

Sincerely yours,

Kathy Fultz R.T.
Kathy Fultz
Manager, Diagnostic imaging

KF:jm

RECEIVED BY LFMS
Date 11/24/86
Log Nov 17
By
Date Complet. 11/26/86

FEE EXEMPT
Ex 170.11(a)(9)

CONTROL NO. 82803

CONTROL NO. ~~82498~~

RECEIVED NOV 20 1986

NOV 20 1986

REGION III

RECEIVED
JAN 20 1987
REGION III

8710050432 870512
REG3 LIC30
34-18884-01 PDR

Brown County General Hospital

425 Home Street
Georgetown, Ohio 45121 • (513) 378-6121

January 6, 1987

W. L. Axelson, Chief
Nuclear Materials Safety and Safeguards Branch
United States Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Dear Mr. Axelson:

Attached, please find our corrective action report which addresses the deficiencies you noted in your fall inspection here. We are eager to respond to your findings and hope you will find our action plan complete.

As we discussed on the phone, I think our deficiencies could be attributed to a variety of factors, including new and inexperienced personnel and an embarrassing inattention to detail. Your survey and findings provided a welcome but sobering critique of our compliance with NRC standards.

I can assure you that Ms. Diana Fisher, Dr. Julie Farrell, our Chief Technician and I, personally, will monitor the situation more carefully in the future, and will see that the corrective action proposed is, indeed, taken.

Thank you for your candidness and the assistance you've provided since your site visit. Should you have any questions or concerns about our plan of action, please don't hesitate to call.

Sincerely,

David A. Ferrell
Administrator

DAF:tb

8702030331 1p

Brown County General Hospital

425 Home Street
Georgetown, Ohio 45121 • (513) 378-6121

December 29, 1986

W. L. Axelson, Chief
Nuclear Materials Safety and Safeguards Branch
United States Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Mr. Axelson:

As per your letter received December 11, 1986, I am submitting the following preliminary report in explanation of corrective action taken to address activities identified during the routine safety inspection conducted November 6 through December 5, 1986, as being in non-compliance with NRC requirements. We will be following up on all corrective actions taken until we are in full compliance.

I trust that this information evidences appropriate corrective action to bring Brown County General Hospital into compliance with NRC requirements. If there are any questions concerning the corrective action plan, please feel free to contact me or Dr. Julie A. Farrell.

Sincerely,

Kathy Fultz RT

Kathy Fultz, RT
Manager Diagnostic Imaging Services

KF/slp

Enc.

8702030344 13pp.

NRC VIOLATIONS & RESPONSES

License No. 34-18884-01

1. Violation I

License Condition No. 22 requires that licensed material be possessed and used in accordance with the statements, representations, and procedures contained in certain referenced applications and letters.

The referenced application dated February 28, 1985 states the Radiation Safety Committee will maintain written minutes of each meeting.

Contrary to the above, in 1986, written minutes of each meeting were not maintained. Specifically, a review of the minutes for the Hospital Safety Committee, with which the radiation safety committee meeets at least quarterly, did not reference radiation safety.

This is a Severity Level V violation (Supplement VI).

Procedure: Hospital Policy AD #23 (see attached).

Corrective Action:

A. Revision of policy as follows:

   D. The Radiation Safety Officer shall be responsible for a quarterly review of occupational exposures and radiation level surveys.

B. Meeting of the Safety Committee on December 30th with the Radiation Safety Officer reviewing occupational exposures and radiation level surveys.

Initial starting date: December 30, 1986

I. The Radiation Safety Program shall be monitored by the Radiation Safety Committee, a subcommittee of the Safety Committee (a subcommittee of the Hospital's Quality Assurance Committee).

A. The Committee shall consist of these members:

1. Julie Farrell, MD, Radiologist, Chairman & Radiation Safety Officer.
2. Diana Fisher - Administrative Assistant.
3. Representative from Nursing Services.
4. Representative from Maintenance Department
5. James G. Kereiakes, Ph.D. Physicist (Ex-officio).

B. The Committee's responsibilities include:

1. Reviewing all safety aspects of the present program.
2. Maintaining records of committee meetings, actions, recommendations, and decisions.
3. Preparing and disseminating information pertaining to radiation safety.
4. Delegating responsibility to the Radiation Safety Officer for conduct of routine radiation safety programs.
5. Maintaining records of receipts, transfers, and disposal of radioactive materials and total possession levels.
6. Initiating corrective actions as necessary to assure radiation safety to personnel and to patients.
7. Reviewing the training and experience of any individual who uses radioactive material and determining that qualifications are sufficient to perform duties safely.

8. Making a comprehensive annual review of the entire radiation safety program to assure fulfillment of NRC licensing requirements, including implementation of ALARA concept. Specific consultation of the Radiation Health Physicist shall be sought in performing this review.

C. The committee shall meet at least quarterly with all records of the meetings kept by the Chairman.

Date First Adopted: _____

Date Last Revised: _____

Date Last Reviewed: 7/84

NRC VIOLATIONS & RESPONSES

License No. 34-18884-01

2. Violation II

License Condition No. 22 requires that licensed material be possessed and used in acccrdance with the statements, representations, and procedures contained in certain referenced applications and letters.

The referenced letter received June 18, 1985 described your hot lab/ imaging room.

Contrary to the above, in October 1986, use of radioactive material in this room was discontinued and was initiated in another room without the authorization of the NRC.

This is a Severity Level IV violation (Supplement VI).

Procedure:

A. Identify the premises.

B. Show that reasonable effort has been made to eliminate residual contamination.

C. Describe the scope of the survey and general procedures.

D. State the findings in units specified in the instruction.

Corrective Action:

A. Blueprints of the fracture/scanning room and the present nuclear scanning room have been obtained. See attached.

B. All the necessary surveys were obtained the end of November 3, 1986, and forwarded to Dr. James G. Kereiakes, Ph.D., for interpretation.

C. Four wipe tests of the fracture/scanning room were obtained.

1. One of the counter where the calibrator was located.

2. Two of the floor: the area under the camera and the patient counting area.

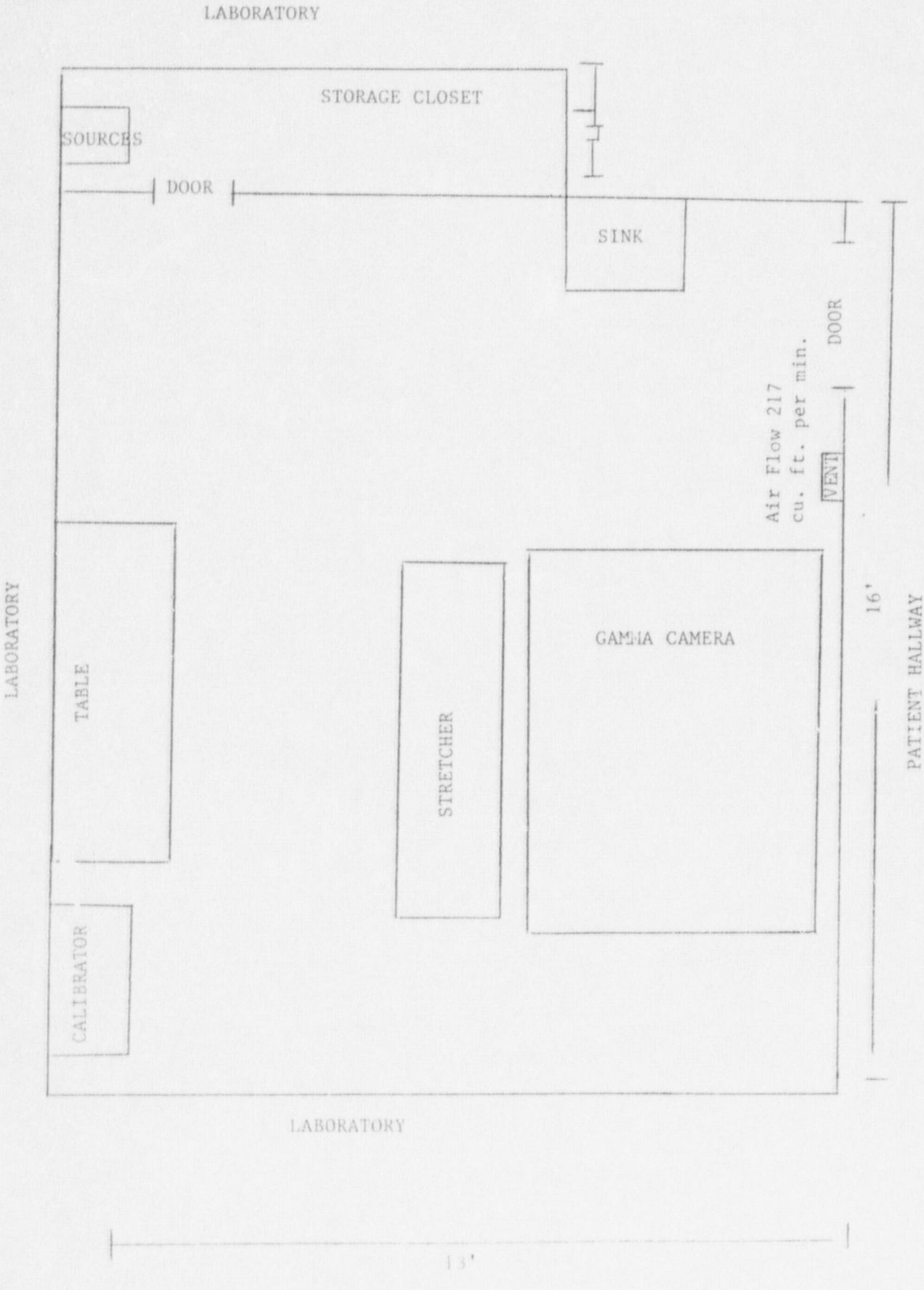
3. One of the area where the sealed sources were located.

Mark Rembis, Maintenance Mechanic, performed air flow and exhaust rates on both rooms. These rates were forwarded to Dr. James G. Kereiakes, Ph.D., for interpretation.

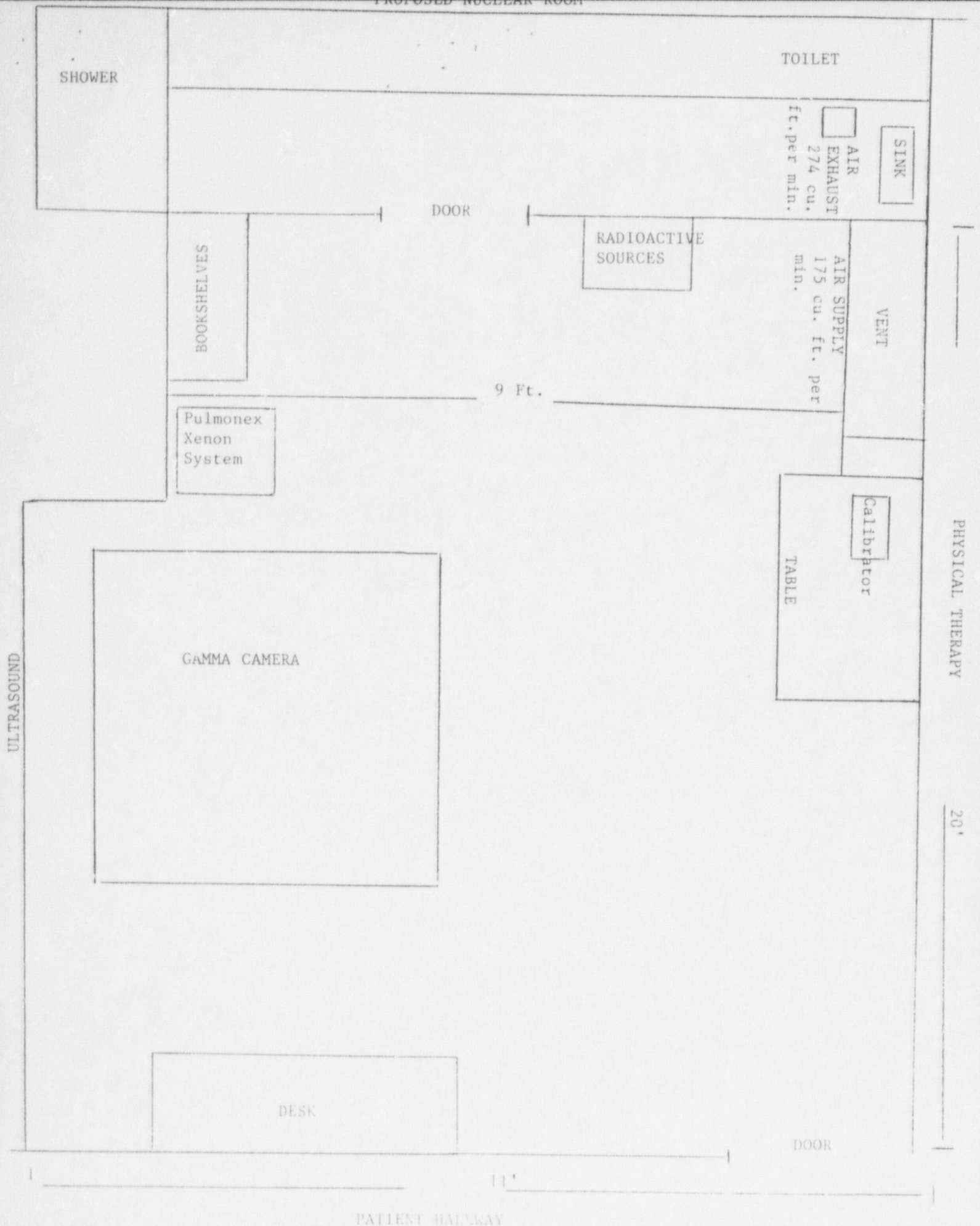
D. We are waiting for Dr. Kereiakes to forward us his interpretations. Upon their arrival, we will forward them to you.

Initial starting date: November, 1986

PRESENT NUCLEAR ROOM



PROPOSED NUCLEAR ROOM



NRC VIOLATIONS & RESPONSES

License No. 34-18884-01

3. Violation III

10 CFR 35.14(e) requires that sealed calibration or reference sources possessed pursuant to 10 CFR 35.14(d) be tested for leakage and/or contamination at intervals not to exceed six months.

Contrary to the above, a cesium-137 sealed calibration source (with nominal activity of 197 microcuries) was not leak tested at six month intervals. Specifically, the source was not leak tested between August 1984 and October 1985, nor between October 1985 and August 1986; both periods which exceeded six months.

This is a Severity Level IV violation (Supplement VI).

Procedure:

Dr. James G. Kereiakes, Ph.D., tests for leakage and/or contamination of cesium-137 sealed calibration source.

Corrective Action:

The Radiation Safety Officer will contact Dr. Kereiakes one month prior to his leak test date. If he is not available, other arrangements will be made.

Initial starting date: March 3, 1986

NRC VIOLATIONS & RESPONSES

License No. 34-18884-01

4. Violation IV

License Condition No. 19 requires the licensee to calibrate the dose calibrator in accordance with the procedures in Appendix D. Section 2 of Regulatory Guide 10.8, October 1980.

Contrary to the above, in 1985 and 1986, to date, the licensee did not calibrate the dose calibrator in accordance with those procedures. Specifically, the test for linearity was not performed quarterly.

This is a Severity Level IV violation (Supplement VI).

Procedure: Linearity checks are performed bi-annually.

Corrective Action:

As of December, linearity checks will be performed quarterly to assure compliance with requirements of the Nuclear Regulatory Commission. Linearity checks have been completed and the Safety Committee has been informed of their completion. All information of checks will be reported and checked quarterly at the Safety Committee meetings. These December checks were not available, but will be reviewed at the next meeting.

Initial starting date: December, 1986

NRC VIOLATIONS & RESPONSES

License No. 34-18884-01

5. Violation V

License Condition No. 22 requires that licensed material be possessed and used in accordance with the statements, representations, and procedures contained in certain referenced applications and letters.

The referenced letter received June 18, 1985, states that procedures in Appendix F of Regulatory Guide 10.8, dated October 1980, will be followed for safely opening packages containing radioactive material. Appendix F requires the licensee to record measured exposure rates.

Contrary to the above, in 1986, to date, the licensee did not record the measured exposure rates. For example, a licensee representative frequently recorded 30 mR/hr for the surface exposure rate when the value actually was 0.06 mR/hr. The value of 0.06 mR/hr corresponds to 30 counts per minute on the licensee's survey meter.

On the day of the inspection, these values were not obtained by the inspector when a package was resurveyed.

This is a Severity Level V violation (Supplement VI).

Procedure:

Survey the outside of case with GM survey meter Victoreen model 498 (window open) at 3 feet and at surface. Record reading in mR/hr background -- mR/hr). Then wipe outside of case and individual syringe shields with a moistened cotton applicator; hold applicator up against GM survey meter Victoreen model 498 (window open). Record reading in mR/hr (background -- mR/hr). Initialize.

Corrective Action:

Bob Galley, Nuclear Medicine Manager at Bethesda Base will be inservicing Tammy Newman, Nuclear Medicine Technologist on Friday, December 19 in the reading of survey meters.

Inservice has been completed with good results.

Initial starting date: December 19, 1986

NRC VIOLATIONS & RESPONSES

License No. 34-18884-01

6. Violation VI

License Condition No. 22 requires that licensed material be possessed and used in accordance with the statements, representations, and procedures contained in certain referenced applications and letters.

The referenced letter received June 18, 1985, states that an air sampler will be used for monitoring xenon-133 charcoal trap efficiency.

Contrary to the above, in 1985 and 1986, to date, an air sampler was not used for monitoring xenon-133 charcoal trap efficiency. Specifically, a licensee representative stated that trap efficiency was determined by measuring the exposure rate at the exhaust port of the Pulmonex system with a survey meter.

This is a Severity Level IV violation (Supplement VI).

Procedure:

The trap efficiency was determined by measuring the exposure rate at the exhaust port of the Pulmonex system with a survey meter at each machine use.

Corrective Action:

On December 29, 1986, Dr. Kereiakes was contacted and we consulted on the type of air sampler that is needed to monitor the xenon-133 charcoal trap efficiency. After consultation, it was decided that an air sampler was not necessary. The air bottle uses a 3 liter plastic specimen bottle and one-way valves available from a disposable ventilation kit. The trap exhaust is pumped through the sampler for two minutes; then the sampler is removed and checked with a GM survey meter (window open) placed against surface of bottle. After this calibration, the observed count rate observed provides a measure of xenon-133 concentration in the trap exhaust. Knowledge of the volume of air pumped through the trap per ventilation study combined with the assay of the xenon-133 concentration allows trapping efficiency to be estimated. This trapping efficiency is compared to a pre-determined minimum acceptable value of 95%. This shall be documented by the nuclear technologist.

Dr. Kereiakes will deliver the air bottle and give complete instructions as to its use. This instruction is scheduled for the middle of January.

Initial starting date: December 29, 1986

Date when full compliance will be achieved:

Upon arrival and inservice of use of the air bottle.

NRC VIOLATIONS & RESPONSES

License No. 34-18884-01

7. Violation VII

10 CFR 71.5(a) requires compliance with the applicable requirements of the Department of Transportation regulations in 49 CFR Parts 170 through 189.

49 CFR 173.241 states that radioactive materials whose activity per package does not exceed the limits specified in 173.423 are excepted from specification packaging, shipping paper and certification, marking, and labeling requirements of this subchapter and requirements of this subpart if 173.421(a) through (f) are satisfied.

Contrary to the above, in 1986, to date, according to a licensee representative, activity in packages returned to a nuclear pharmacy were not determined by the licensee to ensure that the limits specified in 173.423 were not exceeded.

This is a Severity Level IV violation (Supplement V).

Procedure: None

Corrective Action:

Brown County General Hospital will check all activity in packages prior to their return to Syncor, a nuclear pharmacy, to ensure that the limits specified in 173.423 are not exceeded. This will comply with requirements of the Nuclear Regulatory Commission.

Initial starting date: November 17, 1986

DAILY LOG OF SYNCOR PRODUCTS

NOV. 1986

DATE	RECEIVING	DEPARTURE	DATE	RECEIVING	DEPARTURE
11-17-86	^{99m}Tc ^{133}Xe 200 mCi	^{99m}Tc ^{133}Xe 71.2mCi 1330pm	12-13-86	50mCi ^{99m}Tc	^{99m}Tc 2.4mCi
11-18-86	^{99m}Tc-200mCi	^{99m}Tc 71.2mCi 1330pm	12-15-86	^{99m}Tc ^{201}Tl ^{123}I (.1) 250mCi	^{99m}Tc ^{201}Tl 64.4mCi
11-19-86	^{99m}Tc-200Ci	^{99m}Tc 65.0mCi	12-16-86	^{99m}Tc 200mCi	^{99m}Tc 53.3mCi
11-20-86	^{99m}Tc-200mCi	^{99m}Tc ^{133}Xe 28.6 1330pm			
1-24-86	^{99m}Tc ^{133}Xe ^{201}Tl 250mCi	^{99m}Tc ^{201}Tl 91.6mCi			
11-25-86	^{99m}Tc-200mCi	^{99m}Tc 66.9mCi			
11-26-86	^{99m}Tc-201Tl 200mCi	^{99m}Tc ^{201}Tl 28.3mCi			
1-28-86	^{99m}Tc-25mCi	^{99m}Tc-2.1mCi			
12-1-86	^{99m}Tc ^{201}Tl ^{133}Xe 200mCi	^{99m}Tc ^{201}Tl 63.1mCi			
2-2-86	^{99m}Tc ^{123}I 250mCi	^{99m}Tc 93.0mCi			
12-3-86	^{99m}Tc ^{201}Tl 200mCi	^{99m}Tc ^{201}Tl ^{133}Xe 59.3mCi			
12-4-86	^{99m}Tc 250mCi	^{99m}Tc 60.3mCi			
12-5-86	^{99m}Tc 50.2Ci	^{99m}Tc 1.8mCi			
12-8-86	^{99m}Tc ^{133}Xe ^{201}Tl 200mCi	^{99m}Tc ^{133}Xe ^{201}Tl 68.1mCi			
12-9-86	^{99m}Tc ^{133}Xe ^{123}I 200mCi	^{99m}Tc ^{133}Xe ^{123}I 138.0mCi 25.7mCi			
2-10-86	^{99m}Tc ^{201}Tl 200mCi	^{99m}Tc ^{201}Tl 46.6mCi			
2-12-86	^{99m}Tc ^{133}Xe 50mCi	^{99m}Tc 2.2mCi			