

MASSACHUSETTS GENERAL HOSPITAL

HARVARD MEDICAL SCHOOL

030-00239

DEPARTMENT OF RADIOLOGY

Division of Radiological
Sciences and Technology

Director

EDWARD W. WEBSTER, Ph.D.

Professor of Radiology (Physics)



Mailing Address

Massachusetts General Hospital

Boston, Massachusetts 02114

(617) 726-8326/3078

November 24 1989

U.S. Nuclear Regulatory Commission,
Region I,
475 Allendale Rd,
King of Prussia, PA 19406

Addendum to License Renewal

#20-03814-14

mailed 11/24/89

Gentlemen,

It has come to my attention that one item that should have been included in our application was inadvertently omitted.

I am attaching two copies of a certificate relating to the Cobalt-60 source transfer which occurred on April 19 1989 and which therefore has reduced our complement of teletherapy units from two to one under the above license.

The application was mailed today and I trust that this document will be added to the original and one copy which was sent to you.

Sincerely,

Edward W. Webster, Ph.D.
Chairman, Rad. Safety Comm.

OFFICIAL RECORD COPY ML10

9211100374 920325
PDR FOIA
STOLL92-58 PDR

111516

NOV 27 1989

11/10/374

A/51

TELETHERAPY UNIT AND SOURCE TRANSFER

This is to certify that a cobalt-60 source described as follows:

Model Number: C-146 AECL
Serial Number: S-3876
Containing 5605 curies as of 4-18-89

has been determined by a wipe test to be leak free and has been removed from a teletherapy unit described as follows:

Manufacturer: AECL
Model Number: Eldorado 78
Serial Number: 16

The above unit and source have been removed and transferred from
Massachusetts General Hospital 20-03814-14
to Neutron Products' License MD-31-025-03.

Joseph Long M.G.H.

DATE: April 19, 1989

D. Repp
Neutron Products, Inc.

DATE: 4-19-89

NEUTRON PRODUCTS Inc
OFFICIAL RECORD COPY ML18

22301 Mt. Ephraim Road • P.O. Box 68 • Dickerson, Maryland 20842 USA • 301/349-5001
TWX: 710-828-0542 • FAX: 301/349-5007

DEPARTMENT OF RADIOLOGY

Division of Nuclear Medicine



Mailing Address:

Massachusetts General Hospital
Boston, Massachusetts 02114
(617) 726-8350

November 24, 1989

Ms. Maryanne Spicer
Administrative Director of Safety
and Regulatory Affairs
Blossom Court

Dear Maryanne:

This letter constitutes our response to Notice of Violations found during the NRC inspection of Nuclear Medicine July 25-28, 1989. Specifically we are responding to item C.2, Appendix I, of NRC letter to you dated October 27, 1989.

The violation deals with the daily performance of radiation surveys in areas where radiopharmaceuticals are handled and weekly surveys of the waste storage areas.

The three areas of non-compliance found and are response to each are as follows:

1. No surveys of radiopharmaceutical handling areas were performed for 11 consecutive days in March 1989 and on 17 consecutive days in May 1989.

Response: During the periods in question, the responsibility for daily surveys in Nuclear Medicine were being transferred between Radiation Safety and Nuclear Medicine due to personnel shortages in Radiation Safety. Mr. John Hergenrother, Area Manager in Nuclear Medicine states that the surveys were indeed performed during the periods in question. When Radiation Safety personnel again resumed responsibility for these surveys, our records were transferred to them. We unfortunately did not retain copies of these records in Nuclear Medicine and Radiation Safety cannot locate these records.

It is our position that this violation is a result of misplaced records and not as the result of failure to perform required surveys.

Page 2
November 24, 1989

2. No surveys of radiopharmaceutical handling areas were performed on weekends when nuclear medicine procedures were performed on-call.

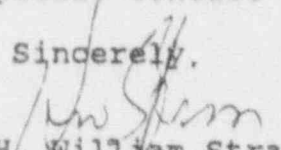
Response: No such surveys were carried out. This deficiency has been corrected effective July 29, 1989. A copy of the forms used by technologists when they are called in on weekends is enclosed for your review. (ATTACHMENT #4)

3. Weekly radiation surveys of Nuclear Medicine and radioactive storage areas were not performed during 13 weeks in 1988 and 13 of 29 weeks in 1989.

Response: Weekly surveys and wipe tests of radiopharmaceutical handling areas and waste storage areas are the responsibility of the Radiation Safety Office. Nuclear Medicine personnel have never been informed that this responsibility was transferred to them, either temporarily or permanently. It is our understanding that this policy remains in effect.

Thank you for providing us the opportunity to respond to these violations. If you require additional information, please contact me.

Sincerely,


H. William Strauss, M.D.
Director, Nuclear Medicine Division
Radiologist, Massachusetts General Hospital
Professor, Harvard Medical School

HWS/elp

cc: Ronald J. Callahan, Ph.D.
John Hergenrother, CNMT

V. SURVEY OF HOSPITAL ROOM AFTER PATIENT LEAVES

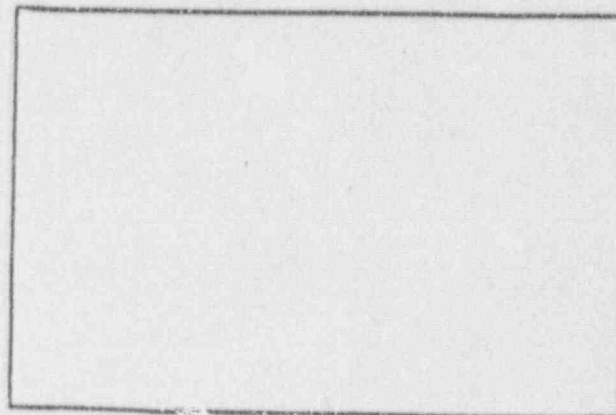
Sample floor plan

Date _____

Survey Instrument _____

Room _____

Surveyed by _____

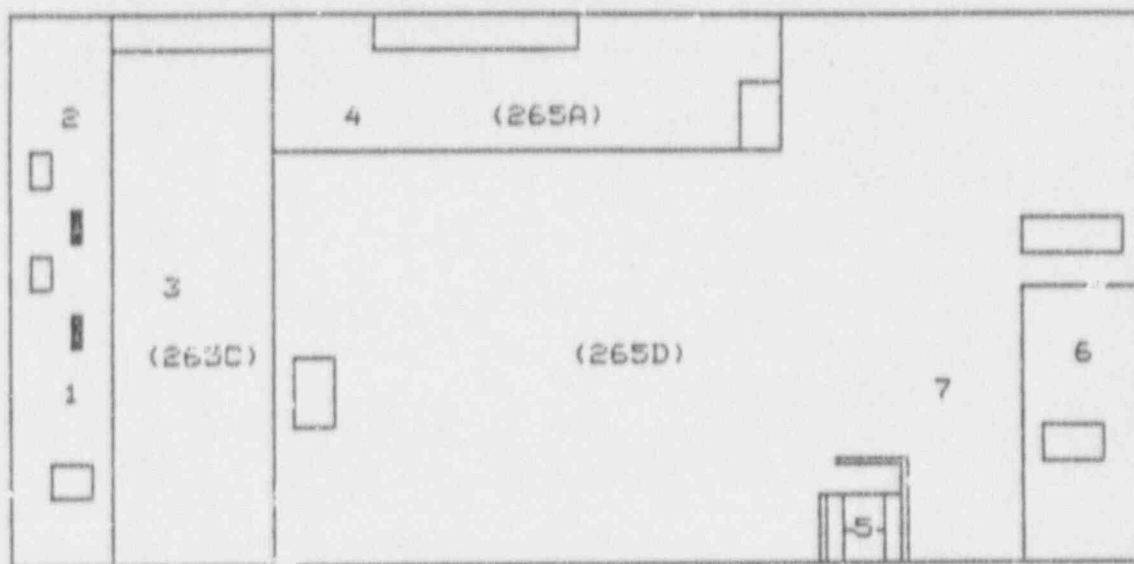


SURFACE SURVEY RESULTS (mR/hr)

| <u>Key #</u> | <u>Place</u> | <u>Initial</u> | <u>After Cleaning</u> | <u>Final</u> |
|--------------|----------------|----------------|-----------------------|--------------|
| Main Room | | | | |
| 1 | Floor-plastic | | | |
| 2 | Floor | --- | | |
| 3 | Bed | | | |
| 4 | Bed linen | | | |
| 5 | Pillow 1 | | | |
| 6 | Pillow 2 | | | |
| 7 | Over Bed Table | | | |
| 8 | Night Stand | | | |
| 9 | TV Control | | | |
| 10 | Bed Control | | | |
| 11 | Phone | | | |
| 12 | Chair | | | |
| 13 | Trash | | | |
| 14 | Bed Pans | | | |
| Bathroom | | | | |
| 15 | Floor-plastic | | | |
| 16 | Floor | --- | | |
| 17 | Toilet Seat | | | |
| 18 | Toilet | | | |
| 19 | Sink | | | |
| 20 | Sink Fixture | | | |
| Extra Items | | | | |
| 21 | | | | |
| 22 | | | | |

Comments:

DISPENSING ROOM AND AREA
WHITE (265A, C AND D)



LOCATIONS

DPM/100cm²

| | |
|----------|-------|
| 1) BENCH | ----- |
| 2) BENCH | ----- |
| 3) FLOOR | ----- |
| 4) FLOOR | ----- |
| 5) CHAIR | ----- |
| 6) BENCH | ----- |
| 7) FLOOR | ----- |

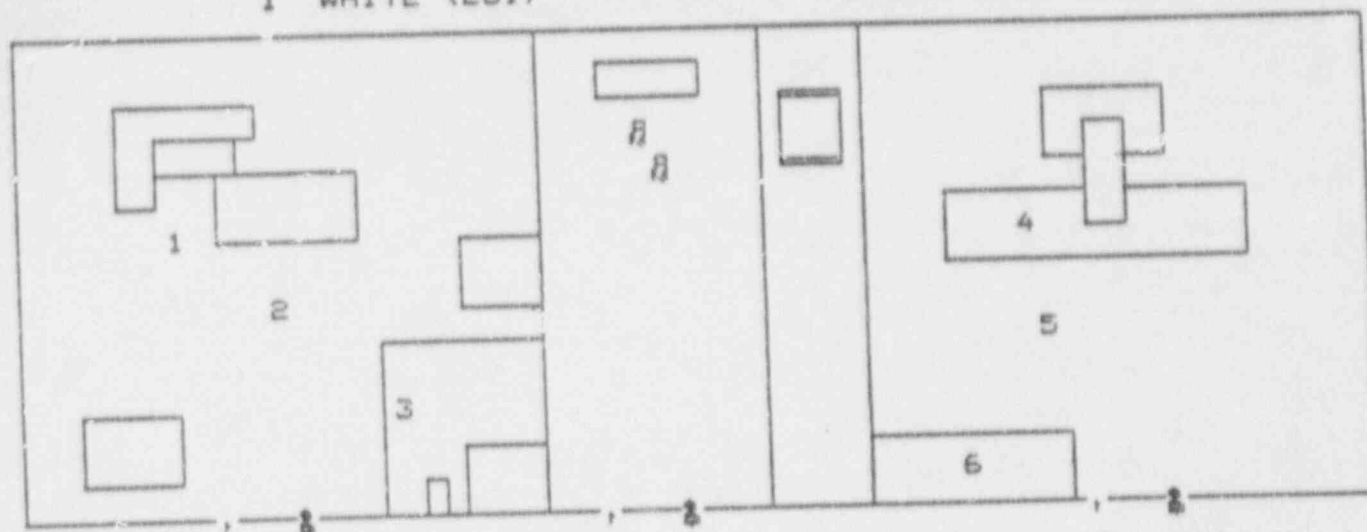
TRIGGER
LEVELS

2000
DPM/100cm²

REMARKS:

DATE: -----
TIME: -----
METER: -----
INITIAL: -----

SCANNING ROOM 1 & 2
1 WHITE (281) WHITE (283) 2



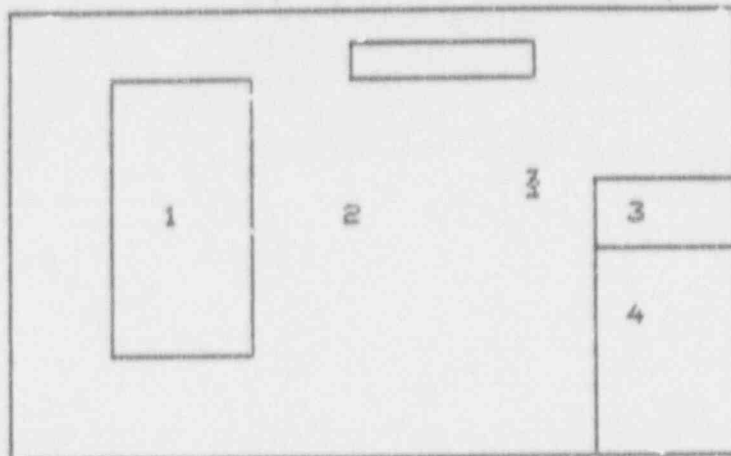
| LOCATION | DPM/100 cm ² |
|----------|-------------------------|
| 1. TABLE | ----- |
| 2. FLOOR | ----- |
| 3. BENCH | ----- |
| 4. TABLE | ----- |
| 5. FLOOR | ----- |
| 6. BENCH | ----- |

TRIGGER
LEVEL
2000
DPM/100cm²

DATE: -----
TIME: -----
INITIAL: -----
METER: -----

REMARKS:

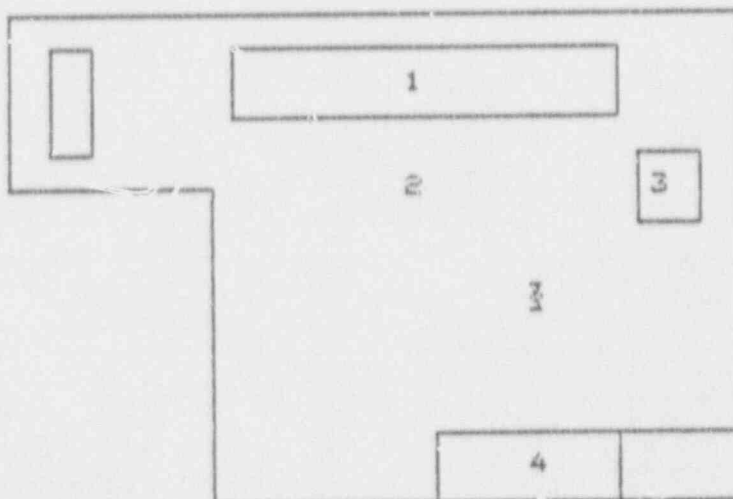
GEMINI 1
WHITE (240)



TRIGGER
LEVEL
2000
DPM/100cm²

| LOCATION | DPM/100cm ² |
|----------|------------------------|
| 1) TABLE | ----- |
| 2) FLOOR | ----- |
| 3) SINK | ----- |
| 4) BENCH | ----- |

GEMINI 2
WHITE (256)



| LOCATION | DPM/100cm ² |
|----------|------------------------|
| 1) TABLE | ----- |
| 2) FLOOR | ----- |
| 3) XENON | ----- |
| 4) SINK | ----- |

DATE: -----

TIME: -----

INITIALS: -----

REMARKS

RADIOPHARMACY
WHITE (258)

| | | | |
|---------------------|---|----|----|
| 4 | 3 | 2 | 1 |
| () () 5 () | 9 | 10 | E |
| 6 | 7 | 8 | 11 |

| LOCATION | DPM/100cm ² |
|--------------|------------------------|
| 1. SINK | ----- |
| 2. BENCH | ----- |
| 3. HOOD | ----- |
| 4. GENERATOR | ----- |
| 5. WASTE | ----- |
| 6. SHIELD | ----- |
| 7. BENCH | ----- |
| 8. BENCH | ----- |
| 9. FLOOR | ----- |
| 10. FLOOR | ----- |
| 11. FRIDGE | ----- |

TRIGGER LEVEL

2000 DPM/100cm²

REMARKS:

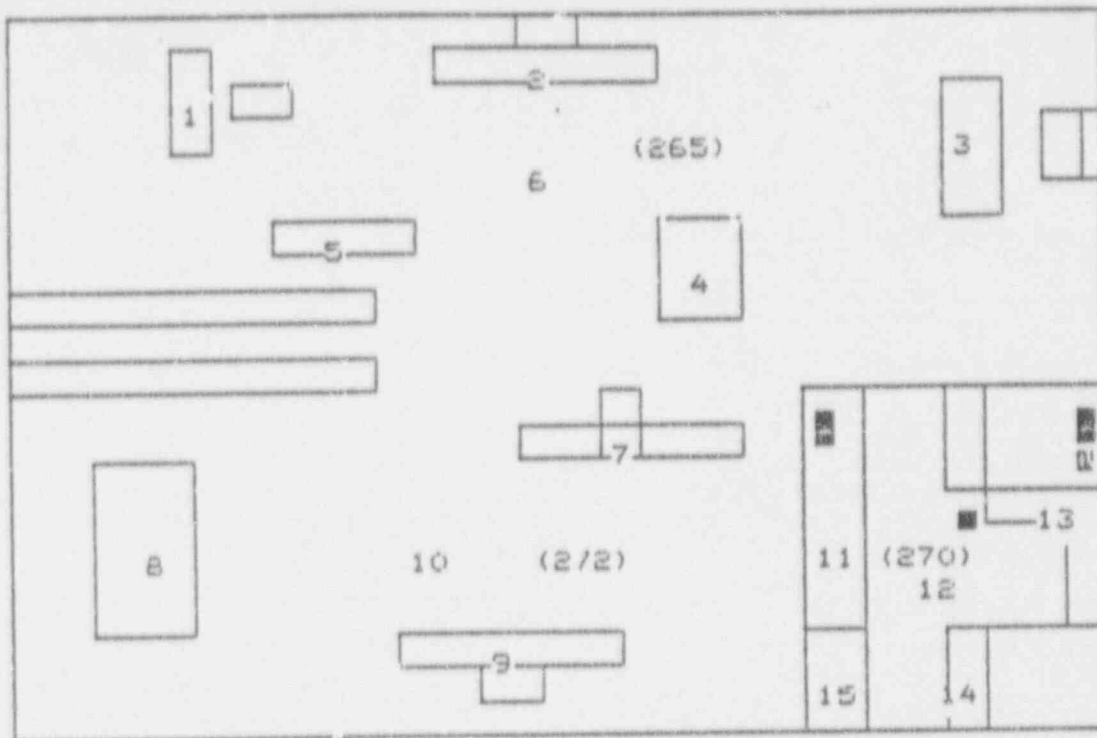
DATE: -----

TIME: -----

INITIALS: -----

METER: -----

NUCLEAR CARDIAC AREA (WHITE 265&270)
CELL LABELING LAB (WHITE 270)



LOCATION

DPM/100cm²

TRIGGER LEVELS

2000 DPM/100cm²

1: TABLE

2: TABLE

3: TABLE

4: TREADMILL

5: TREADMILL

6: FLOOR

7: TABLE

8: TABLE

9: TABLE

10: FLOOR

11: BENCH

12: FLOOR

13: BENCH

14: BENCH

15: HOOD

REMARKS:

DATE: _____

TIME: _____

INITIALS: _____

METER: _____



MASSACHUSETTS GENERAL HOSPITAL

HARVARD MEDICAL SCHOOL

DEPARTMENT OF RADIATION MEDICINE

Please reply to:
Massachusetts General Hospital

Boston, Massachusetts 02114
Telephone (617) 726- _____
Telefax (617) 726-1601

MEMORANDUM

TO Maryanne Spicer
FROM Edward Epp *ERE*
DATE 11-22-89
TOPIC NRC Notice of Violation

With regard to the violation of 10 CFR 19.12, the following steps have been taken:

1. Student teletherapy technologists will attend the Massachusetts General Hospital radiation safety orientation, provided by the Radiation Safety Office.
2. Student teletherapy technologists will receive orientation from a member of the radiation medicine staff regarding the applicable provisions of the NRC's regulations and licenses.
3. No student teletherapy technologist will be allowed to train on a teletherapy unit before the above orientation has been attended.

With regard to the violation of Condition No. 20, Radioactive Materials License No. 20-03814-14 the following provisions have been made:

1. The technologist on weekend call will perform the daily operational and safety checks before treating any patient over the weekend period.
2. Records of the operational and safety checks will be reviewed periodically by the designated teletherapy physicist.

Full compliance with the above responses will be achieved by December 1, 1989.

cc: K. McCarthy
T. Mauceri
J. Leong
S. Larsen

THE MGH CANCER CENTER

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