

Hackensack Medical Center

Date : May 24, 1989.

United States Nuclear Regulatory Commission
Region 1
475 Allendale Road
King of Prussia, PA. 19406

Attention : John Glenn, Ph.D.
Chief Nuclear Materials Safety Section A
Division of Radiation Safety and Safeguards

Docket Nos : 030-02452 License Nos. 29-02641-03
030-00345 29-02641-04
030-29837 29-02641-05

Subject : Routine Inspection No. 89-001

Dear Dr. Glenn :

This is in response to your letter dated May 3, 1989 following the above mentioned inspection on April 13, 1989.

Immediately after the inspection we instructed the technologists under consideration and held a departmental meeting on April 25 to instruct entire Nuclear Medicine staff on proper use of survey instruments and proper documentation of survey results. Minutes of that departmental meeting are attached. All technologists are now performing daily area surveys and package receipt surveys properly. We have attached the results of area surveys performed on 4/15, 4/16, 4/22, 4/29, 4/30, 5/6, 5/7, 5/11, 5/13 and 5/14; and the package receipt surveys performed on 5/3, 5/11 and 5/12 as evidence.

We have taken the following corrective steps with respect to the violations cited in your notice :

1. All technologists were instructed to perform dose calibrator constancy test and area surveys on all days including working weekends. They are now carrying out those procedures as required. This can be seen from the attached records of daily dose calibrator checks dated 4/15, 4/16, 4/22, 4/29, 4/30, 5/6, 5/7, 5/13 and 5/14 as well as the daily survey sheets for the same dates.

RECEIVED-REGION 1



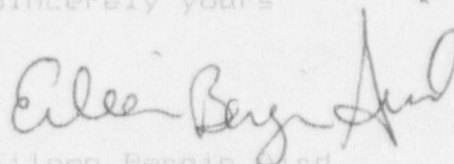
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2. To avoid any future noncompliance, the chief technologist will be responsible for ensuring that all the daily procedures are performed correctly and the Radiation Safety Office will keep a closer eye on the Nuclear Medicine Department activities by conducting periodic 'Mock Inspections'.

3. We hope that the above corrective steps have brought our institution in full compliance with all the conditions of our licenses.

If you have any questions regarding this, please contact Mrs. Alaka Mokadam, our Radiation Safety Officer, at 201-441-2209.

Sincerely yours

A handwritten signature in cursive script, reading "Eileen Bergin Bird". The signature is written in dark ink and is positioned above the printed name and title.

Eileen Bergin Bird
Vice President of Operations

NUCLEAR MEDICINE

DEPARTMENT MEETING

April 25, 1989

POLICY

ACTION

1. Changes in Policy Manual

Everyone must read and sign revisions. All records need to be kept for 3 years.

2. NRC Inspection

Dose Calibrator check shall be performed everyday including weekends when scans are required. All package and area surveys shall be performed according to Policy Manual; making sure all documentation is done properly and in proper format on survey forms. All generators being returned must have Survey Wipe Test results documented on shipping label.

3. Proper use of Survey Instruments and well counter.

All technologists were instructed on proper use of Survey instruments and proper documentation.

PRESENT: Rich Gentile, Susan Charles, Berta Menendez, Gordon Tellefsen, Terry Cooper, Lynn Wilkens, Kusum Patel, Alaka Mokadam (Medical Physicist).

EXCUSED ABSENCE: Irene Grant.

Rich Gentile 4/25/89

Gordon Tellefsen 4/25/89

Berta Menendez 4/25/89

Lynn Ann Wilkens 4/25/89

Susan Charles 4/25/89

Irene Grant 4/25/89

Terry Cooper 4/25/89

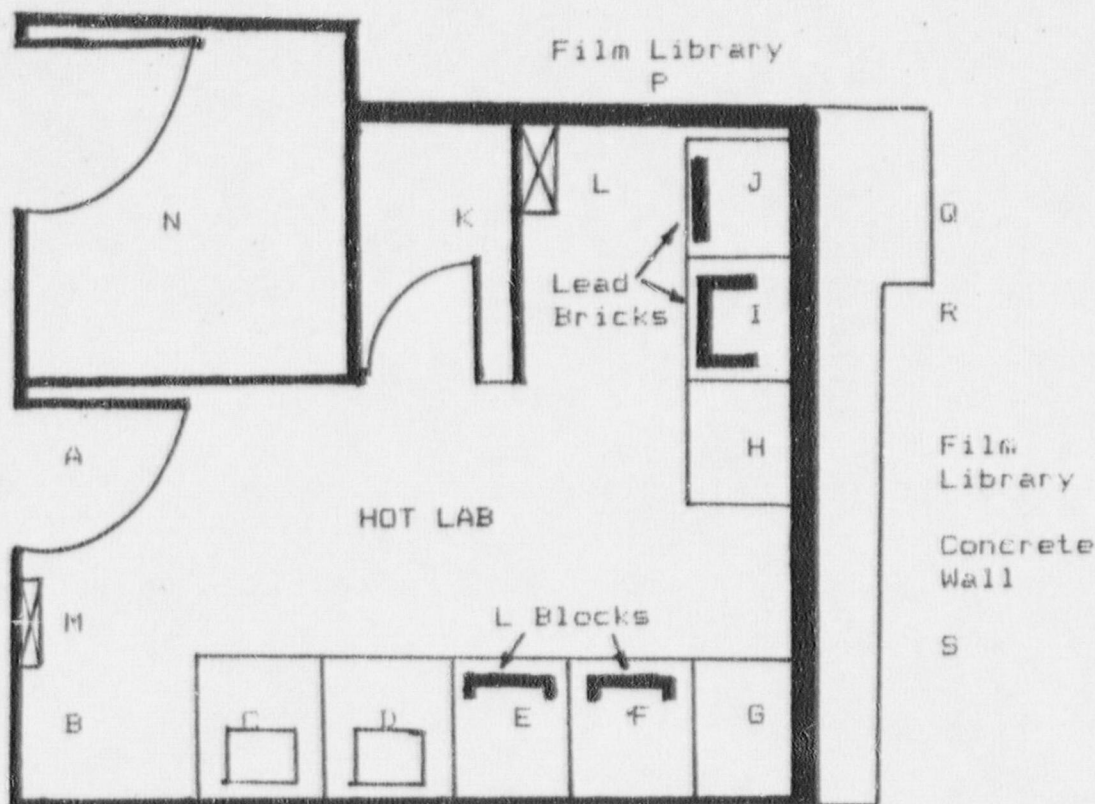
K. Patel 4/25/89

Alaka Mokadam 4/25/89

Daily Area Surveys

HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE HOT LAB



Scale : 1/4" = 1'0"

3/16" lead

1/16" lead

DAILY RADIATION SURVEY

Location	Max. Exposure Rate in mR/hr.	
	Above Counter	Below Counter
A. Entrance	0.1	0.1
B. Outpatient Injection Area	0.1	0.1
C. Cold Sink	0.8	0.1
D. Hot Sink, Hot Waste Cabinet for Tc	7.0	0.1
E. Dose Calibrator	2.0	0.1
F. Radiopharmaceutical Storage & Prep.	6.0	0.1
G. General Storage	0.1	0.1
H. Hot Waste Cabinet for long lived isotopes	0.1	0.1
I. Tc Generator	0.1	0.1
J. High Energy Sources	4.0	0.1
K. Shower	0.1	0.1
L. Exhaust Vent	0.1	0.1
M. Exhaust Vent	0.1	0.1
N. Patient Toilet	0.1	0.1
P. Film Library Cabinet	0.1	0.1
Q. Film Library	0.1	0.1
R. Film Library Desk	0.1	0.1
S. Film Library	0.1	0.1
T. Staircase	0.1	0.1

Instrument Used :

Corrective Action Needed ?

Yes No

Corrective Action Taken :

Initials :

Date :

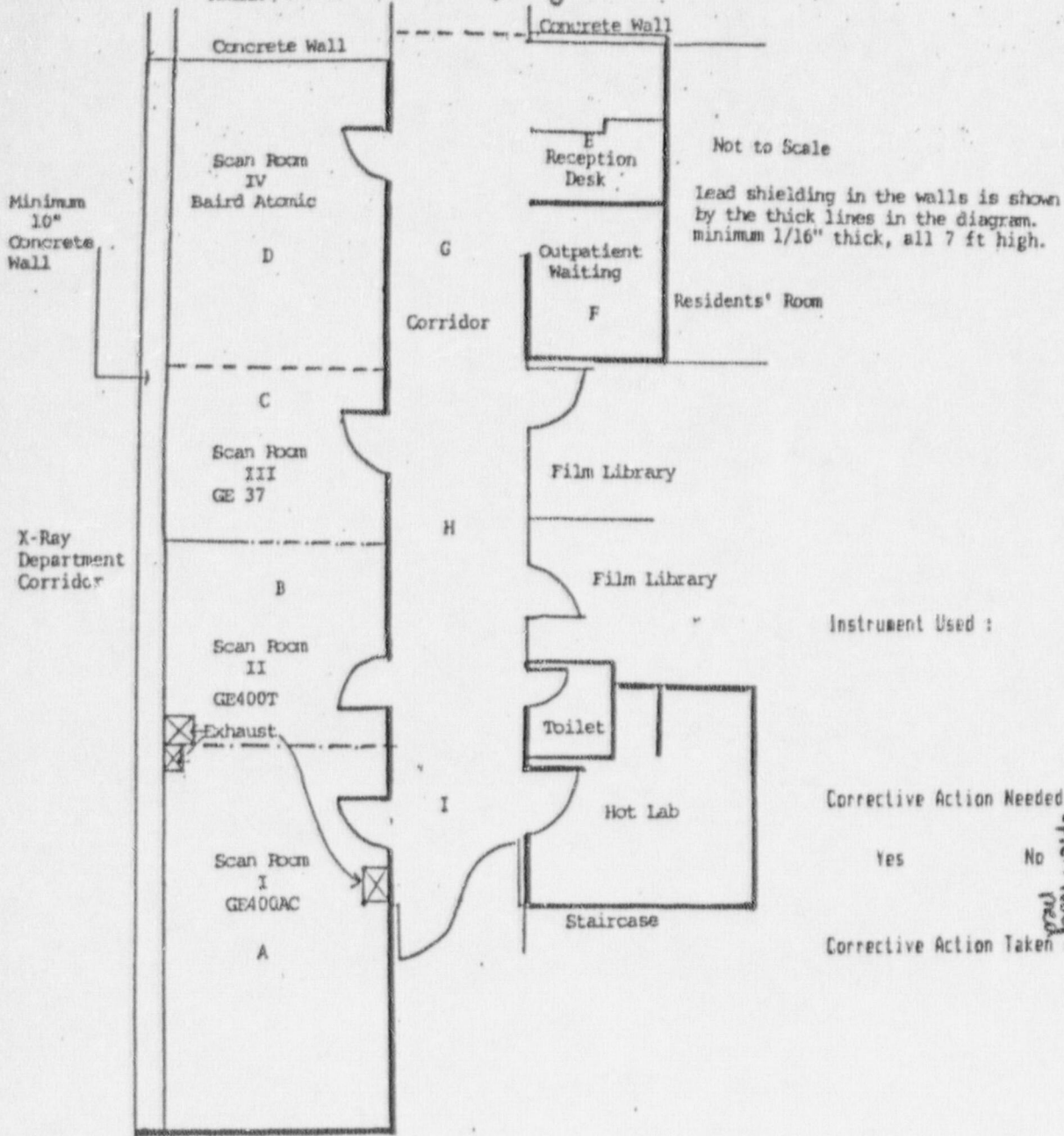
AB

4/15

HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE DEPARTMENT

continuing diagram to Et.



Rm 5
Nuc med
J.
C.T.
8800

DAILY RADIATION SURVEY

Location	Maximum Exposure Rate in mR/hr.
A. Scan Room 1 : G.E. 400 AC	0.05
B. Scan Room 2 : G.E. 400 I	0.05
C. Scan Room 3 : G.E. 37	0.03
Scan Room 4 : Baird Atomic	0.02
E. Reception Desk	0.03
F. Outpatient Waiting Area	0.03
G. Corridor Near Waiting Areas	0.05
H. Corridor Near Film Library	0.03
I. Corridor Near Hot Lab	0.03

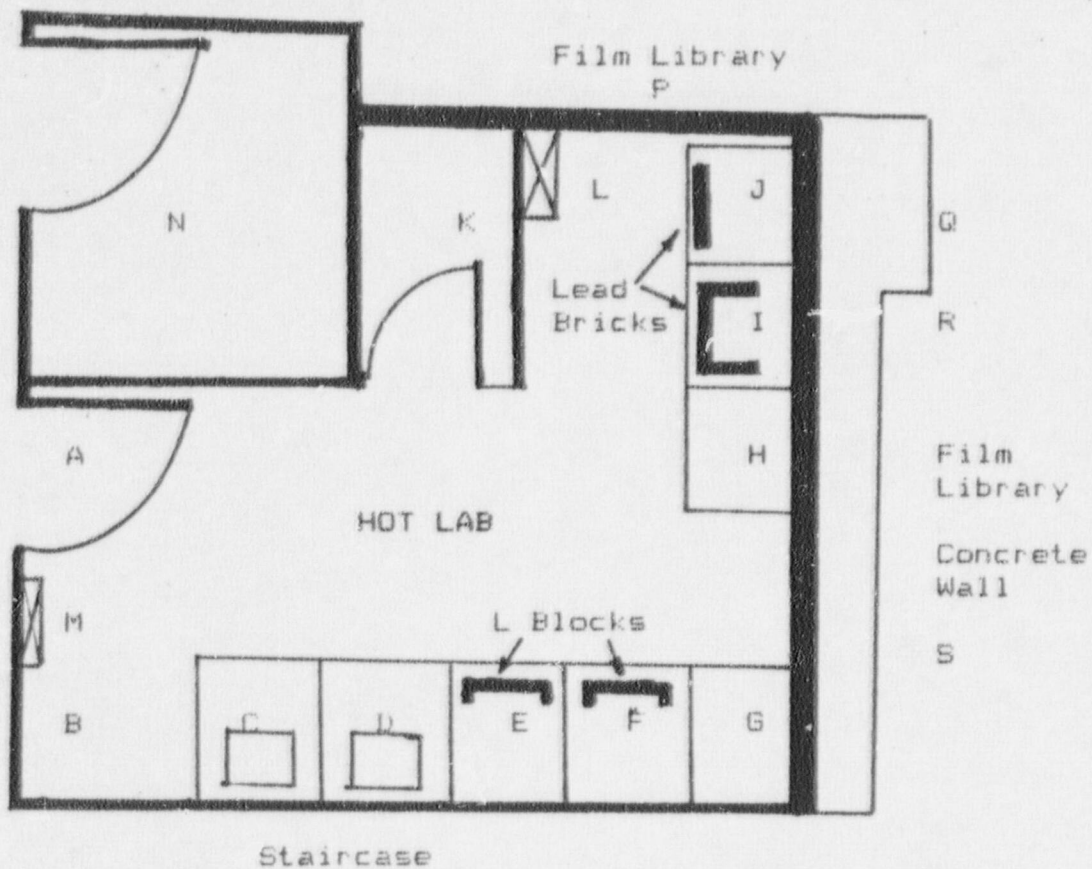
Initials : *MT*

Date : *4/15*

J Scan Room 5

HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE HOT LAB



Scale : 1/4" = 1'0"
 3/16" lead
 1/16" lead

DAILY RADIATION SURVEY

Location	Max. Exposure Rate in mR/hr.	
	Above Counter	Below Counter
A. Entrance	0.1	0.1
B. Outpatient Injection Area	0.1	0.1
C. Cold Sink	0.3	0.1
D. Hot Sink, Hot Waste Cabinet for Tc	0.0	1.0
E. Dose Calibrator	3.0	0.5
F. Radiopharmaceutical Storage & Prep.	3.0	0.1
G. General Storage	0.1	0.1
H. Hot Waste Cabinet for long lived isotopes	0.6	0.1
I. Tc Generator	3.0	0.1
J. High Energy Sources	2.0	0.1
K. Shower	0.1	0.1
L. Exhaust Vent	0.1	0.1
M. Exhaust Vent	0.1	0.1
N. Patient Toilet	0.1	0.1
P. Film Library Cabinet	0.1	0.1
Q. Film Library	0.1	0.1
R. Film Library Desk	0.1	0.1
S. Film Library	0.1	0.1
T. Staircase	0.1	0.1

Instrument Used :

Corrective Action Needed ?

Yes No

Corrective Action Taken :

Initials :

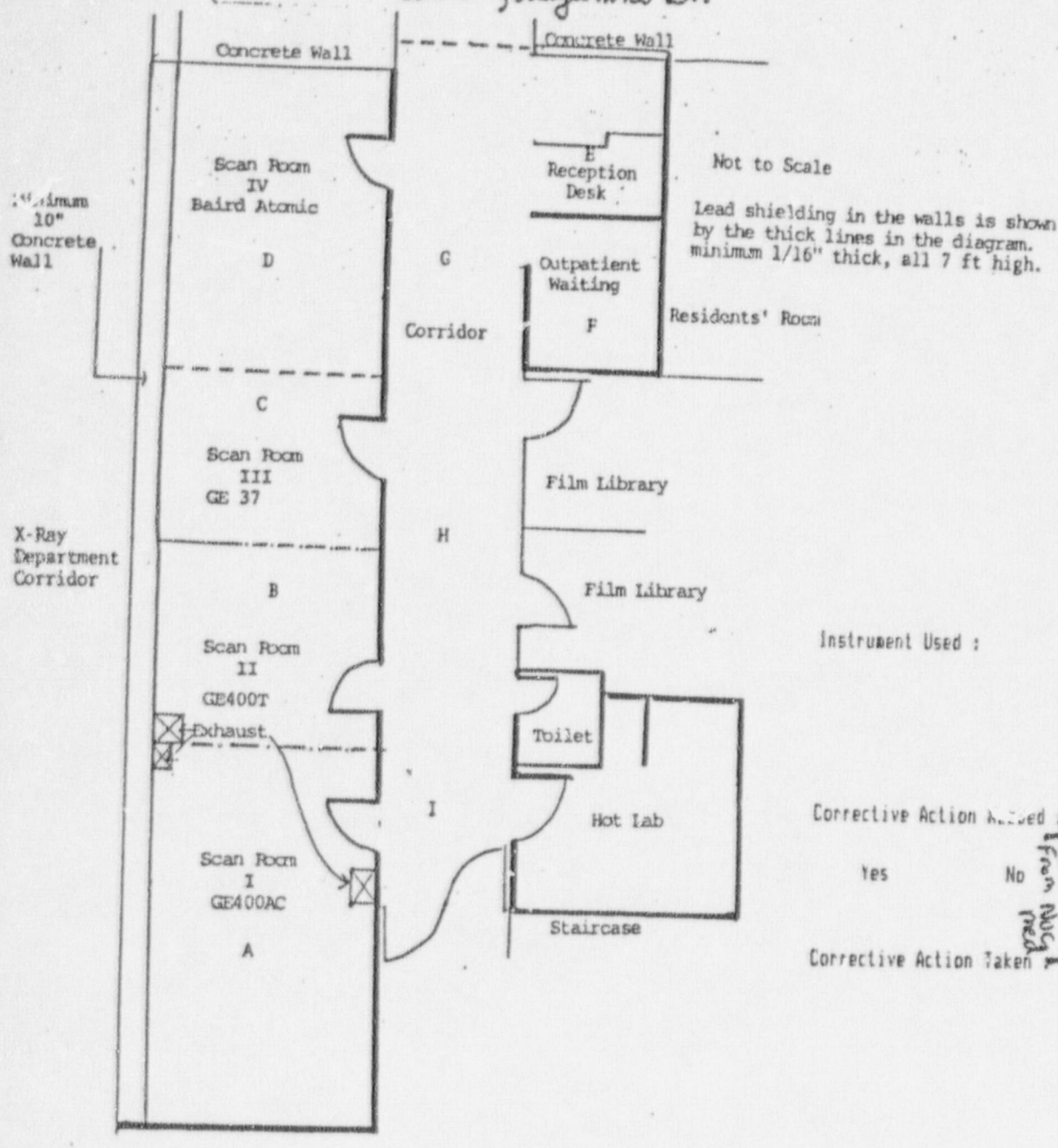
Date :

4/14

HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE DEPARTMENT

continuing diagram to Pt.



DAILY RADIATION SURVEY

Location	Maximum Exposure Rate in $\mu\text{R/hr.}$
A. Scan Room 1: G.E. 400 AC	0.03
B. Scan Room 2: G.E. 400 T	0.03
C. Scan Room 3: G.E. 37	0.04
D. Scan Room 4: Baird Atomic	0.03
E. Reception Desk	0.03
F. Outpatient Waiting Area	0.04
G. Corridor Near Waiting Areas	0.03
H. Corridor Near Film Library	0.03
I. Corridor Near Hot Lab	0.03

Initials : _____

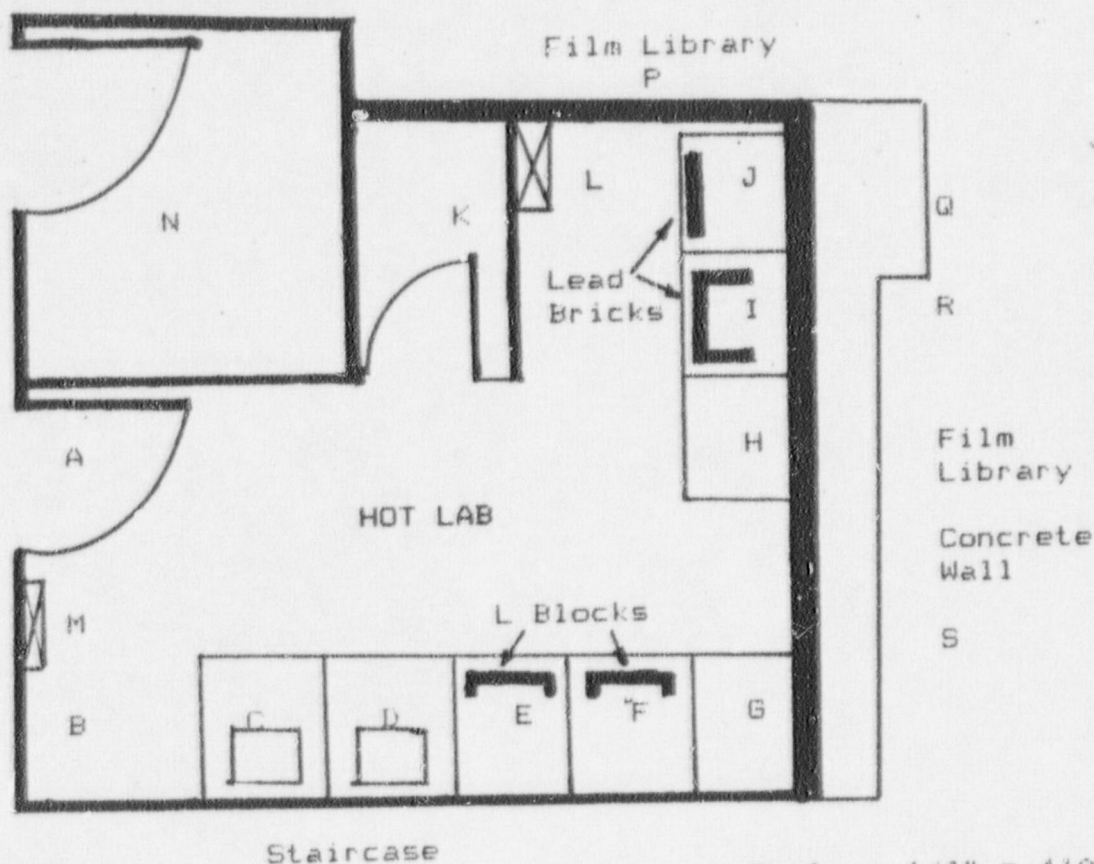
Date : _____

J Scan Room 5



HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE HOT LAB



Scale : 1/4" = 1'0"
 3/16" lead
 1/16" lead

DAILY RADIATION SURVEY

Location	Max. Exposure Rate in mR/hr.	
	Above Counter	Below Counter
A. Entrance	41.0	
B. Outpatient Injection Area	41.0	
C. Cold Sink	41.0	
D. Hot Sink, Hot Waste Cabinet for Tc	1.5	
E. Dose Calibrator	41.0	
F. Radiopharmaceutical Storage & Prep.	41.0	
G. General Storage	41.0	
H. Hot Waste Cabinet for long lived isotopes	1.1	
I. Tc Generator	41.0	
J. High Energy Sources	41.0	
K. Shower		41.0
L. Exhaust Vent		41.0
M. Exhaust Vent		41.0
N. Patient Toilet		
P. Film Library Cabinet		
Q. Film Library		
R. Film Library Desk		
S. Film Library		
T. Staircase		

Instrument Used :

Lucas

Corrective Action Needed ?

Yes

No

Corrective Action Taken :

Initials :

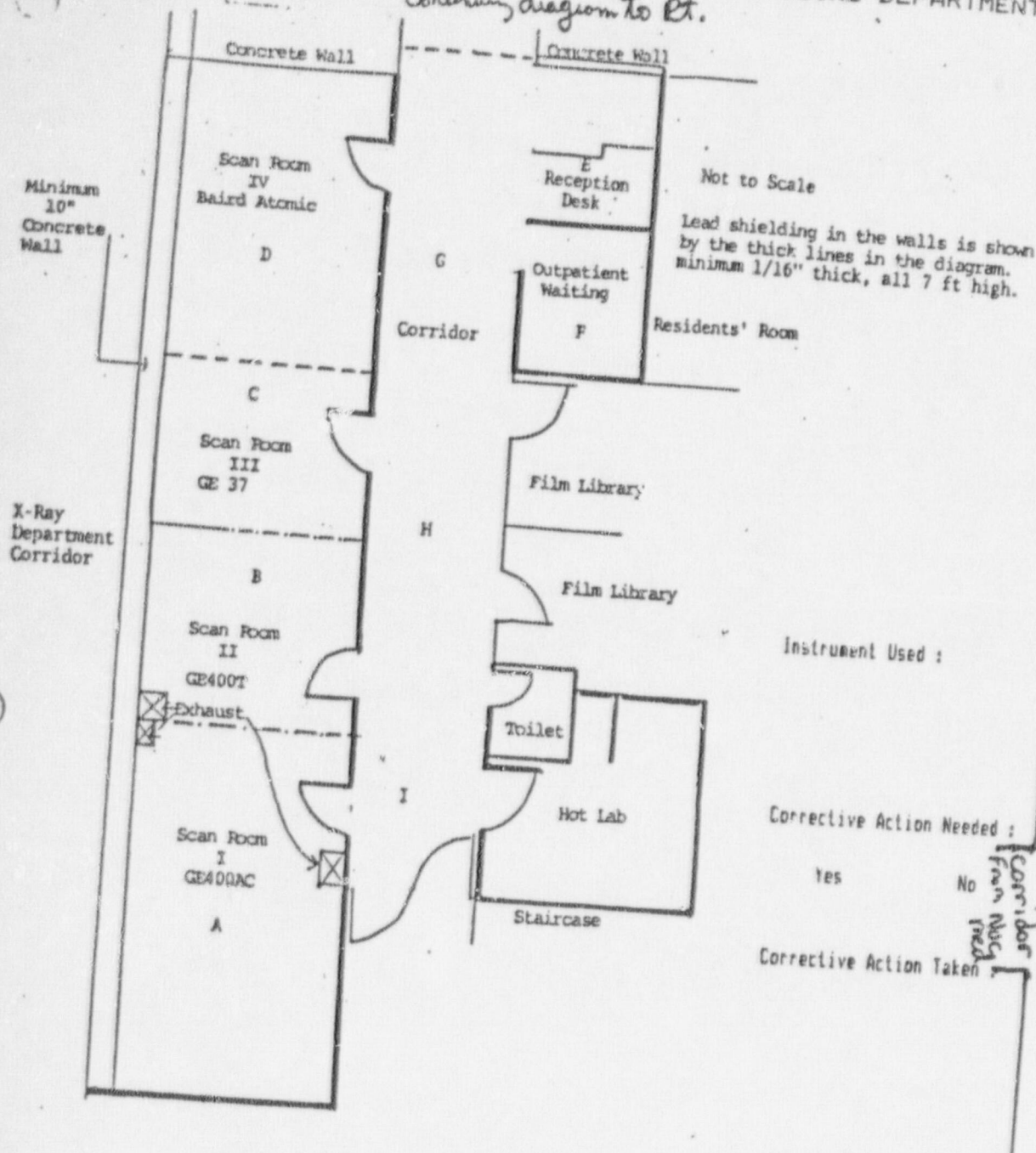
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4/22/89

HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE DEPARTMENT

continuing diagram to Pt.



Instrument Used :

Corrective Action Needed :

Yes

No

Corrective Action Taken :

Rm 5
Nuc med.

J.

C.T.
8800

DAILY RADIATION SURVEY

Location	Maximum Exposure Rate in mR/hr.
Scan Room 1 : G. E. 400 AC	LO.1
Scan Room 2 : G. E. 400 I	LO.1
Scan Room 3 : G. E. 37	LO.1
Scan Room 4 : Baird Atomic	LO.1
Reception Desk	LO.1
Outpatient Waiting Area	LO.1
Corridor Near Waiting Areas	LO.1
Corridor Near Film Library	LO.1
Corridor Near Hot Lab	LO.1
Scan Room 5	LO.2

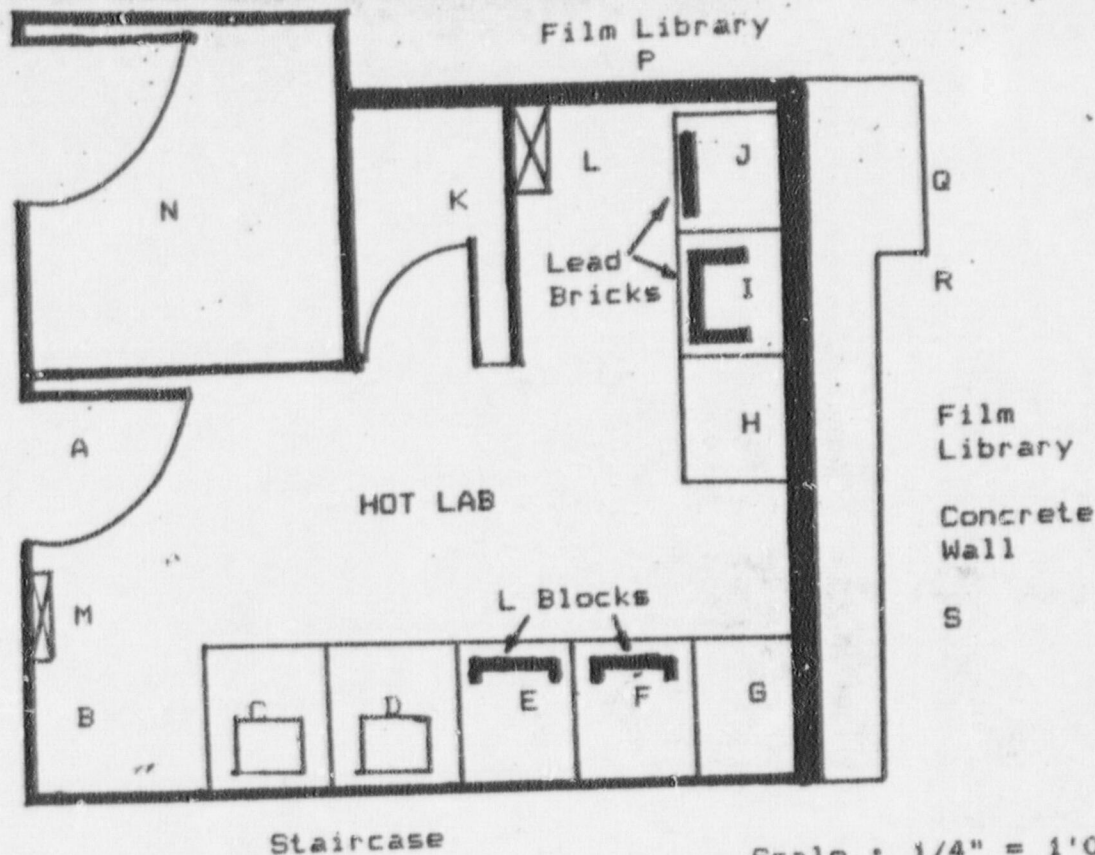
Initials :

Date :

4/22/79

HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE HOT LAB



Scale : 1/4" = 1'0"
 3/16" lead
 1/16" lead

DAILY RADIATION SURVEY

Location	Max. Exposure Rate in mR/hr.	
	Above Counter	Below Counter
A. Entrance	<1.0	
B. Outpatient Injection Area	<1.0	
C. Cold Sink	<1.0	
D. Hot Sink, Hot Waste Cabinet for Tc	<3.5	
E. Dose Calibrator	<1.0	
F. Radiopharmaceutical Storage & Prep.	<1.0	
G. General Storage	<1.0	
H. Hot Waste Cabinet for long lived isotopes	<1.0	
I. Tc Generator	<1.0	
J. High Energy Sources	<1.0	
K. Shower	<1.0	<1.0
L. Exhaust Vent		<1.0
M. Exhaust Vent		<1.0
N. Patient Toilet		
O. Film Library Cabinet		
P. Film Library		
Q. Film Library Desk		
R. Film Library		
S. Staircase		

Instrument Used :

Corrective Action Needed ?

Yes

No

Corrective Action Taken :

Initials :

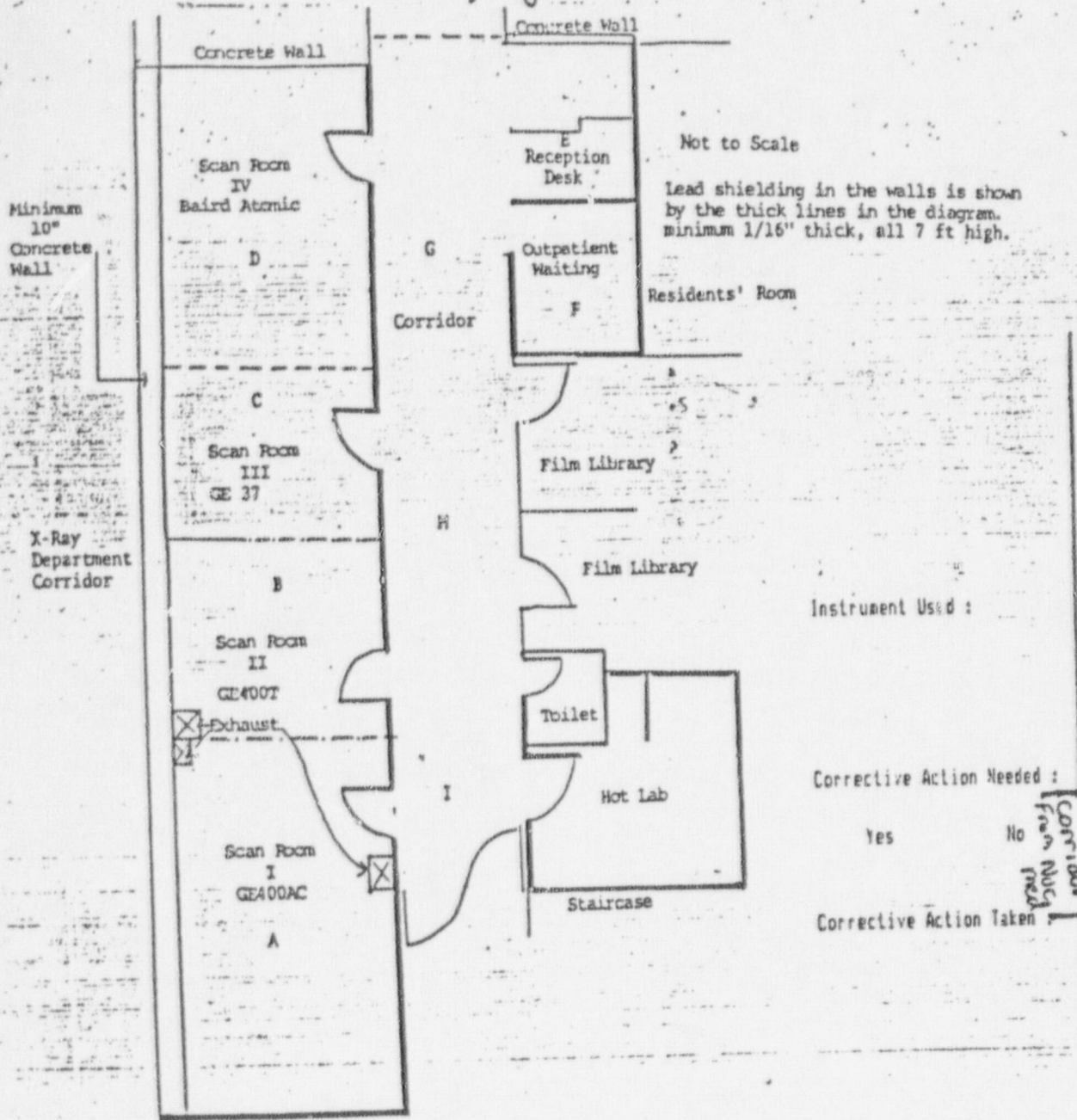
Date :

4/29

HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE DEPARTMENT

continuing diagram to Pt.



DAILY RADIATION SURVEY

Location	Maximum Exposure Rate in mR/hr.
A. Scan Room 1 : G.E. 400 AC	<0.1
B. Scan Room 2 : G.E. 400 T	<0.1
C. Scan Room 3 : G.E. 37	<0.1
Scan Room 4 : Baird Atomic	<0.1
E. Reception Desk	<0.1
F. Outpatient Waiting Area	<0.1
G. Corridor Near Waiting Areas	<0.1
H. Corridor Near Film Library	<0.1
I. Corridor Near Hot Lab	<0.1

J Scan Room 5

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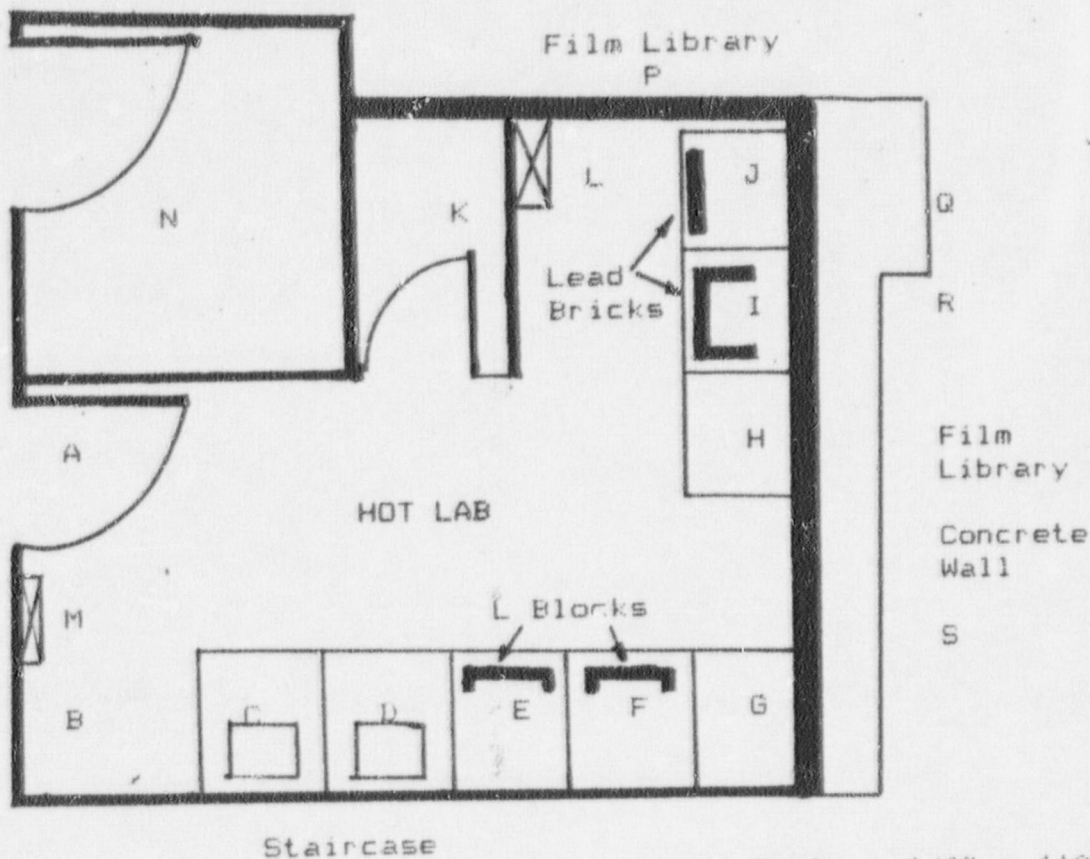
Date :

Bm

1/29

HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE HOT LAB



Scale : 1/4" = 1'0"
 3/16" lead
 1/16" lead

DAILY RADIATION SURVEY

Location	Max. Exposure Rate in mR/hr.	
	Above Counter	Below Counter
A. Entrance	<1.0	
B. Outpatient Injection Area	<1.0	
C. Cold Sink	<1.0	
D. Hot Sink, Hot Waste Cabinet for Tc	3.0	
E. Dose Calibrator	<1.0	
F. Radiopharmaceutical Storage & Prep.	<1.0	
G. General Storage	<1.0	
H. Hot Waste Cabinet for long lived isotopes	2.1	
I. Tc Generator	<1.0	
J. High Energy Sources	<1.0	
K. Shower	<1.0	
L. Exhaust Vent	0.0	<1.0
M. Exhaust Vent	0.0	<1.0
N. Patient Toilet		
P. File Library Cabinet		
Q. File Library		
R. File Library Desk		
S. File Library		
T. Staircase		

Instrument Used :

Corrective Action Needed ?

yes No

Corrective Action Taken :

Initials :

Date :

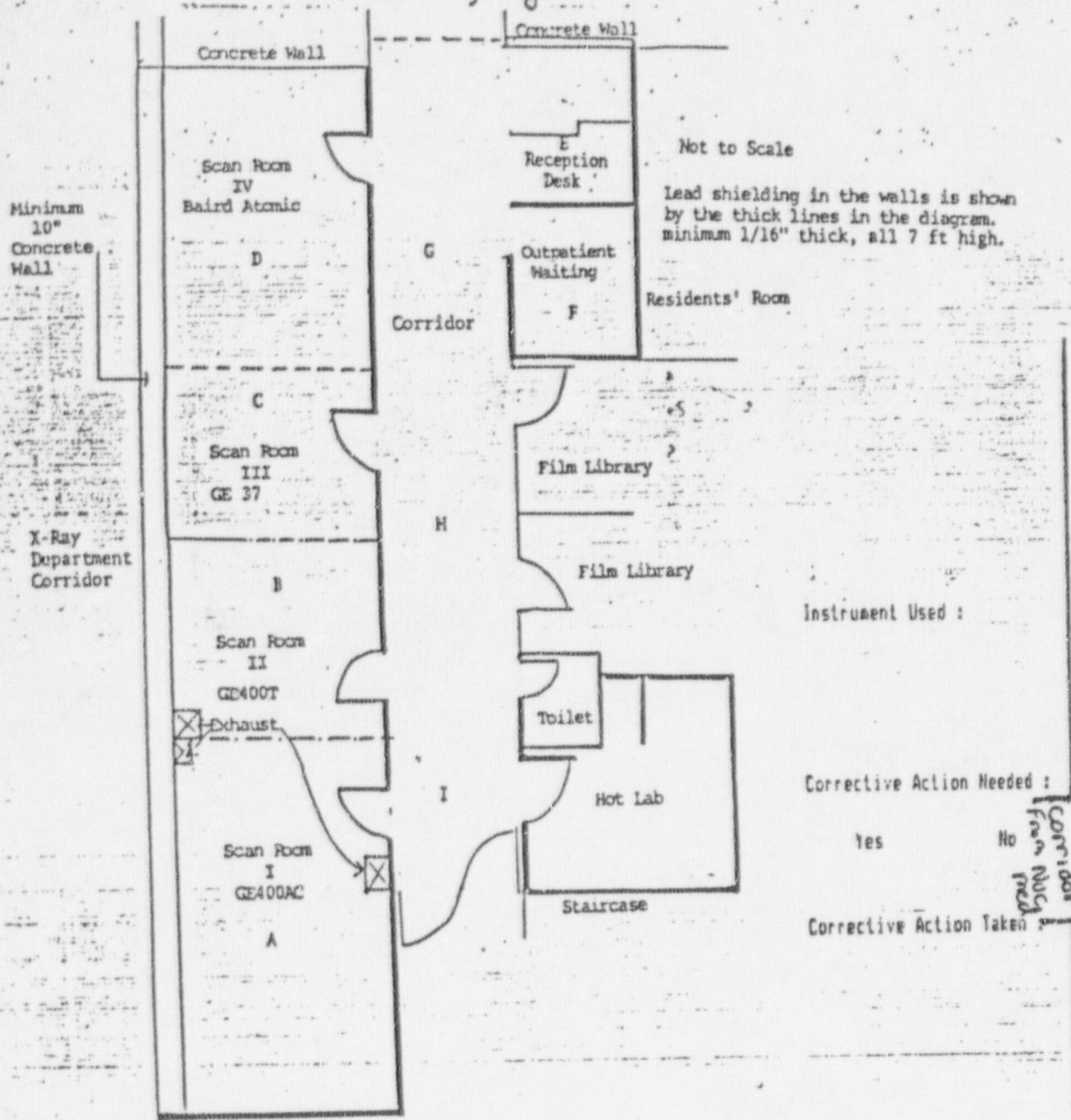
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4/30

HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE DEPARTMENT

continuing diagram to Pt.



DAILY RADIATION SURVEY

Location	Maximum Exposure Rate in mR/hr.
A. Scan Room 1: G. E. 400 AC	≤ 0.1
B. Scan Room 2: G. E. 400 T	≤ 0.1
C. Scan Room 3: G. E. 37	≤ 0.1
D. Scan Room 4: Baird Atomic	≤ 0.1
E. Reception Desk	≤ 0.1
F. Outpatient Waiting Area	≤ 0.1
G. Corridor Near Waiting Areas	≤ 0.1
H. Corridor Near Film Library	≤ 0.1
I. Corridor Near Hot Lab	≤ 0.1

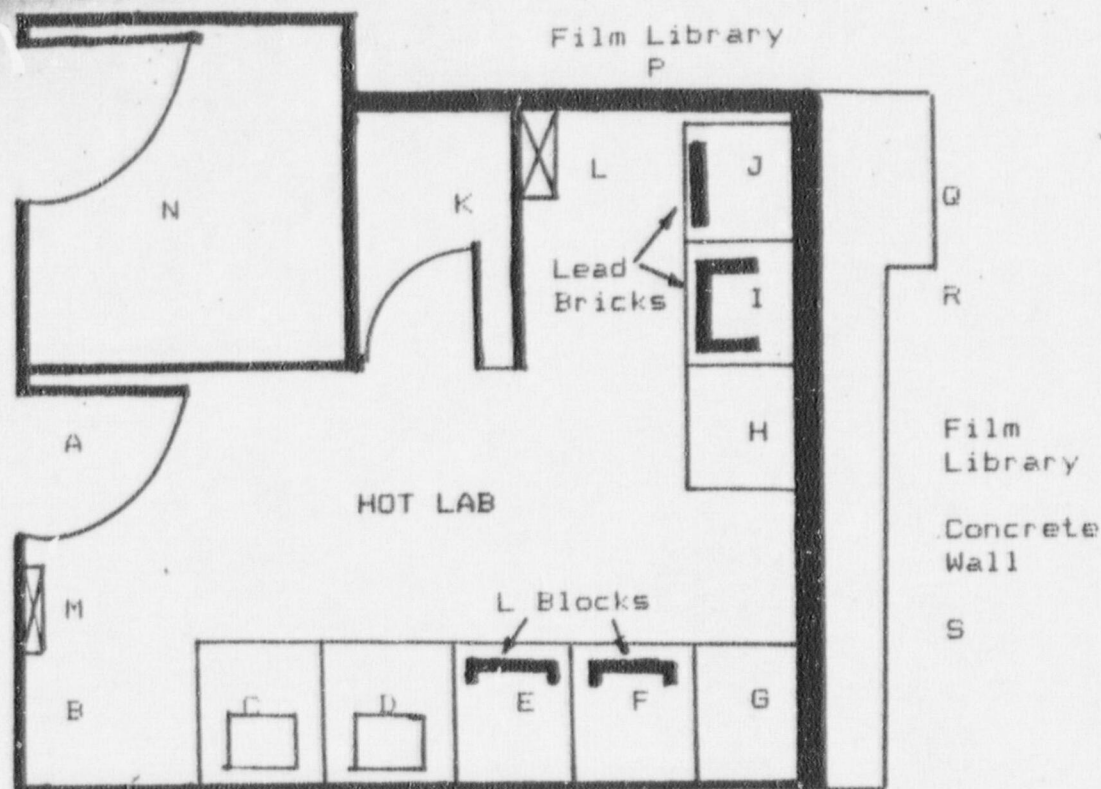
J Scan Room 5

Initials: Bm

Date: 4/30

HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE HOT LAB



Staircase

Scale : 1/4" = 1'0"

3/16" lead
1/16" lead

DAILY RADIATION SURVEY

Location	Max. Exposure Rate in mR/hr.	
	Above Counter	Below Counter
A. Entrance	21.0	
B. Outpatient Injection Area	21.0	
C. Cold Sink	21.0	
D. Hot Sink, Hot Waste Cabinet for Tc	10.0	
E. Dose Calibrator	21.0	
F. Radiopharmaceutical Storage & Prep.	21.0	
G. General Storage	21.0	
H. Hot Waste Cabinet for long lived isotopes	21.0	
I. Tc Generator	21.0	
J. High Energy Sources	21.0	
K. Shower		21.0
L. Exhaust Vent		21.0
M. Exhaust Vent		21.0
N. Patient Toilet		21.0
P. Film Library Cabinet		
Q. Film Library		
R. Film Library Desk		
S. Film Library		
T. Staircase		

Instrument Used :

Corrective Action Needed ?

Yes

No

Corrective Action Taken :

None

Initials :

TC

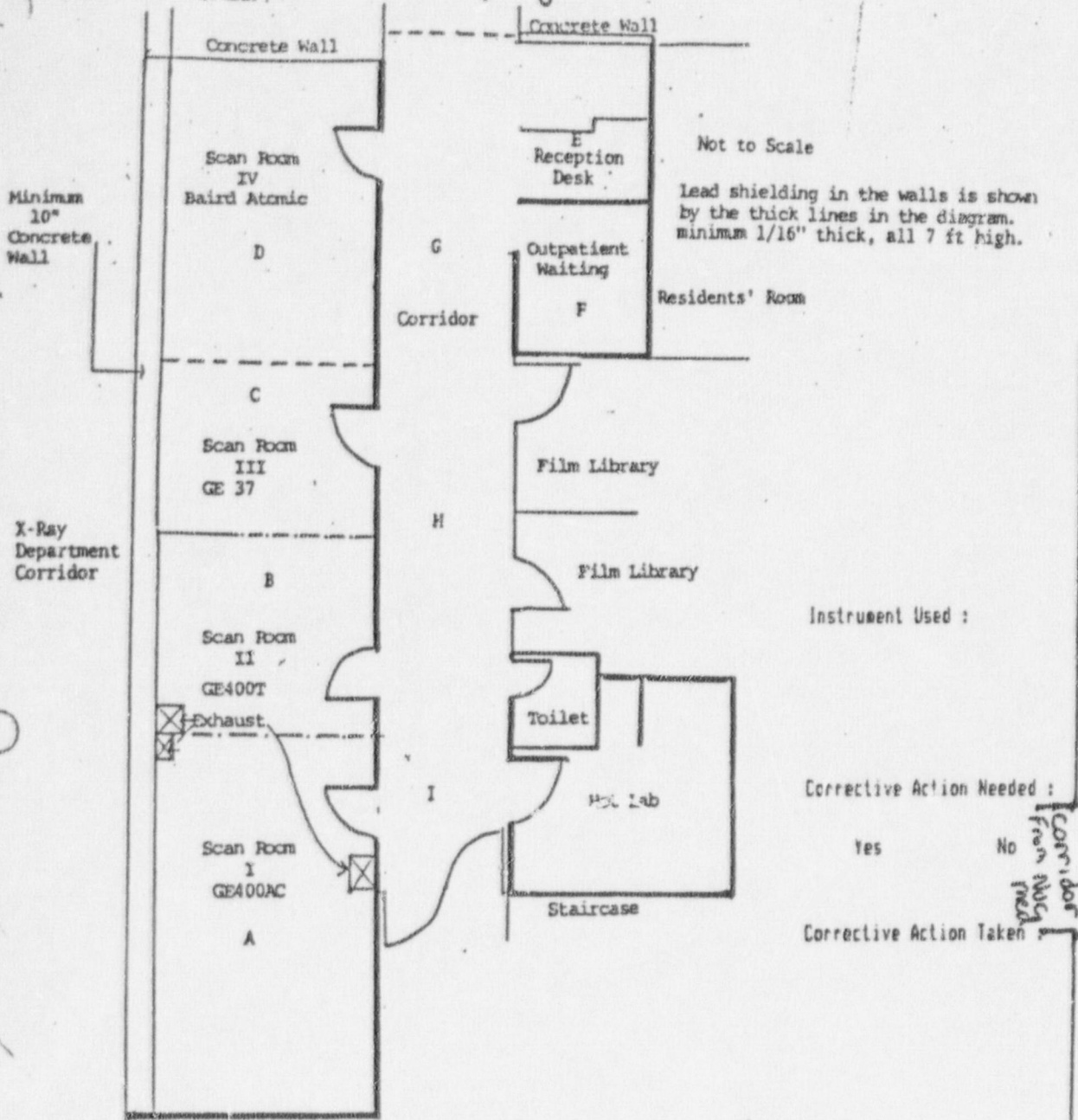
Date :

5/6/89

HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE DEPARTMENT

continuing diagram to Et.



DAILY RADIATION SURVEY

Location	Maximum Exposure Rate in mR/hr.
A. Scan Room 1 : G.E. 400 AC	2.1
B. Scan Room 2 : G.E. 400 T	2.1
C. Scan Room 3 : G.E. 37	2.1
Scan Room 4 : Baird Atomic	2.1
E. Reception Desk	2.1
F. Outpatient Waiting Area	2.1
G. Corridor Near Waiting Areas	2.1
H. Corridor Near Film Library	2.1
I. Corridor Near Hot Lab	2.1

J Scan Room 5

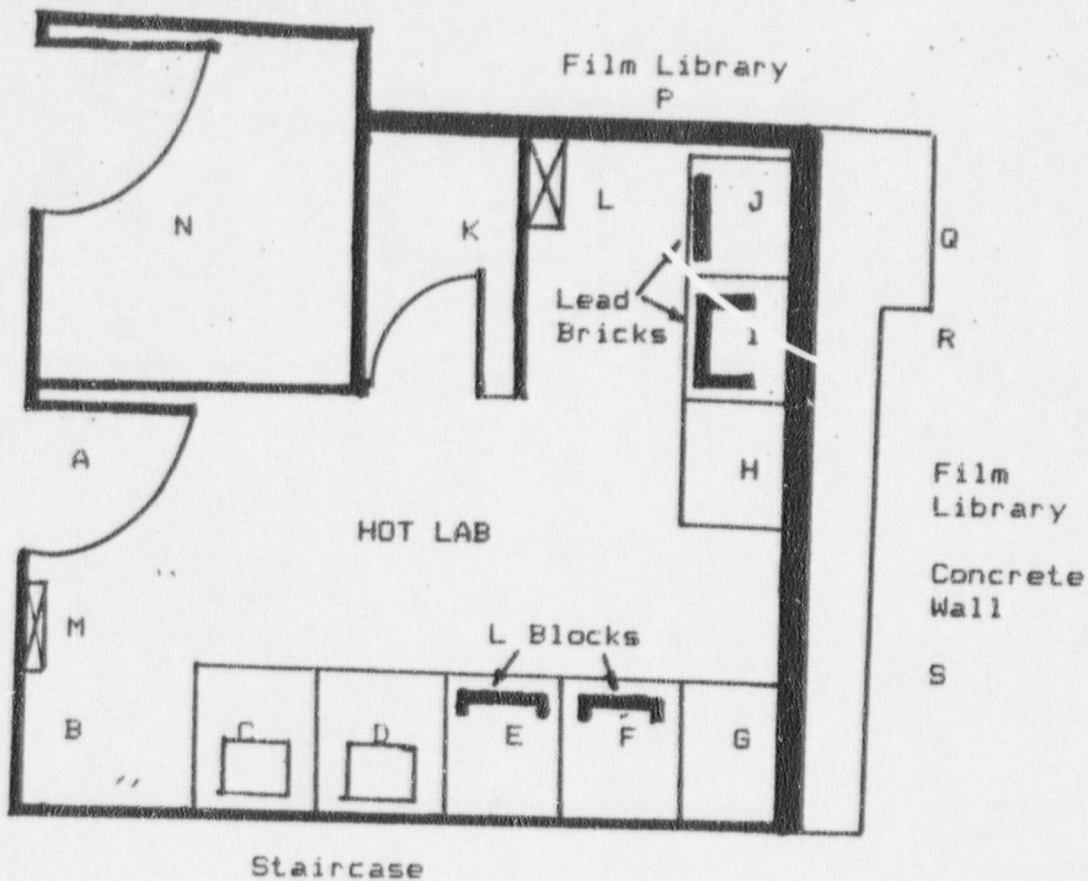
Initials : _____

Date : _____

Rm 5
Nuc med.
J.
C.T.
8800

HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE HOT LAB



Scale : 1/4" = 1'0"
 3/16" lead
 1/16" lead

DAILY RADIATION SURVEY

Location	Max. Exposure Rate in mR/hr.	
	Above Counter	Below Counter
A. Entrance	<1.0	
B. Outpatient Injection Area	<1.0	
C. Cold Sink	<1.0	
D. Hot Sink, Hot Waste Cabinet for Tc	<1.0	
E. Dose Calibrator	<1.0	
F. Radio pharmaceutical Storage & Prep.	<1.0	
G. General Storage	<1.0	
H. Hot Waste Cabinet for Tc	<1.0	
I. Tc Generator	<1.0	
J. High Energy Sources	<1.0	
K. Shower	<1.0	<1.0
L. Exhaust Vent	<1.0	<1.0
M. Exhaust Vent	<1.0	<1.0
N. Patient Toilet	<1.0	<1.0
O. Film Library Cabinet	<1.0	
P. Film Library	<1.0	
Q. Film Library Desk	<1.0	
R. Film Library	<1.0	
S. Staircase	<1.0	

Instrument Used :

Corrective Action Needed ?

Yes

Corrective Action Taken :

None

Initials :

Date :

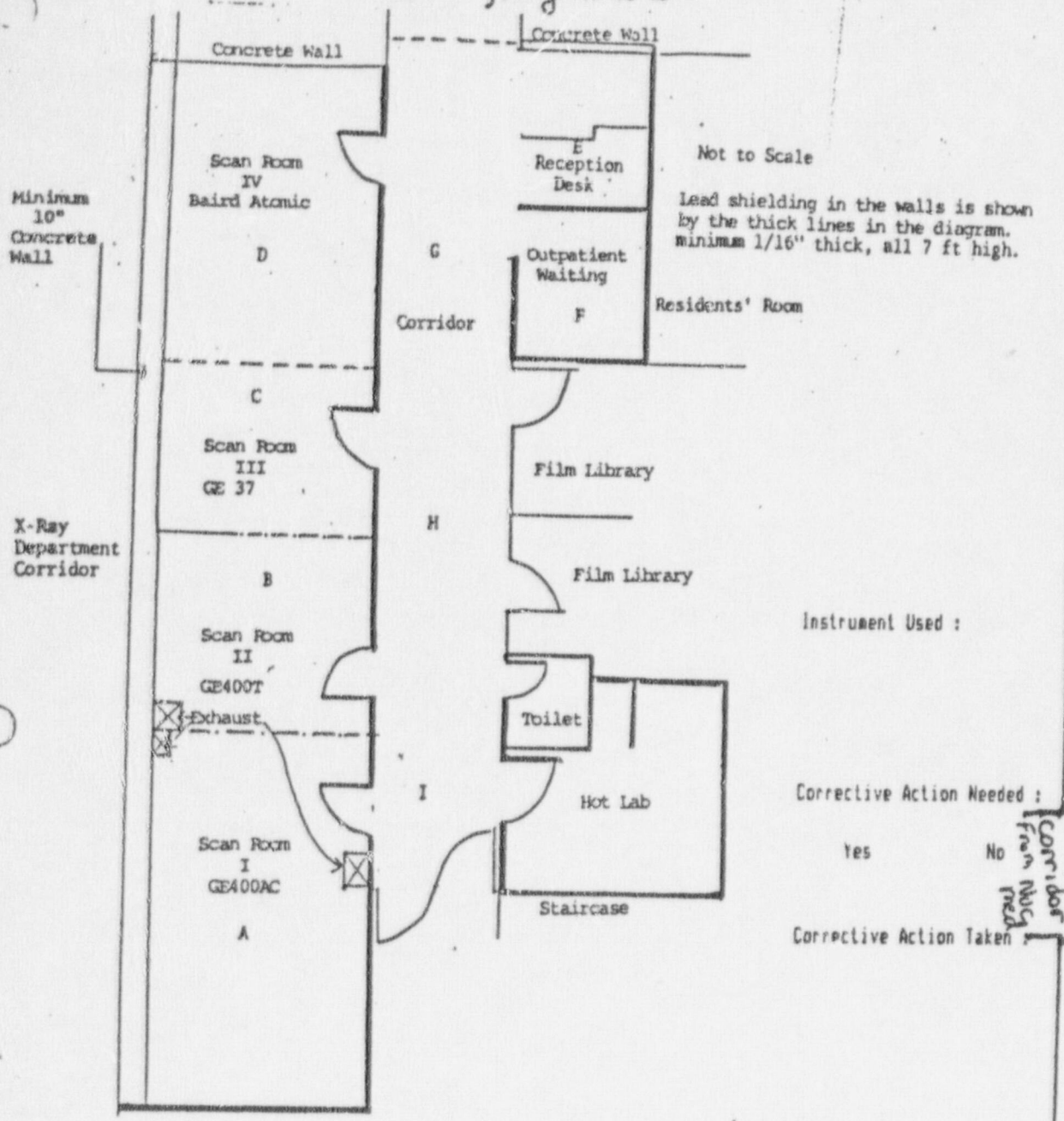
TC

5/7/89

HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE DEPARTMENT

continuing diagram to Pt.



DAILY RADIATION SURVEY

Location	Maximum Exposure Rate in mR/hr.
A. Scan Room 1 : G.E. 400 AC	4.1
B. Scan Room 2 : G. E. 400 T	4.1
C. Scan Room 3 : G. E. 37	4.1
Scan Room 4 : Baird Atomic	4.1
E. Reception Desk	4.1
F. Outpatient Waiting Area	4.1
G. Corridor Near Waiting Areas	4.1
H. Corridor Near Film Library	4.1
I. Corridor Near Hot Lab	4.1

Initials : TC

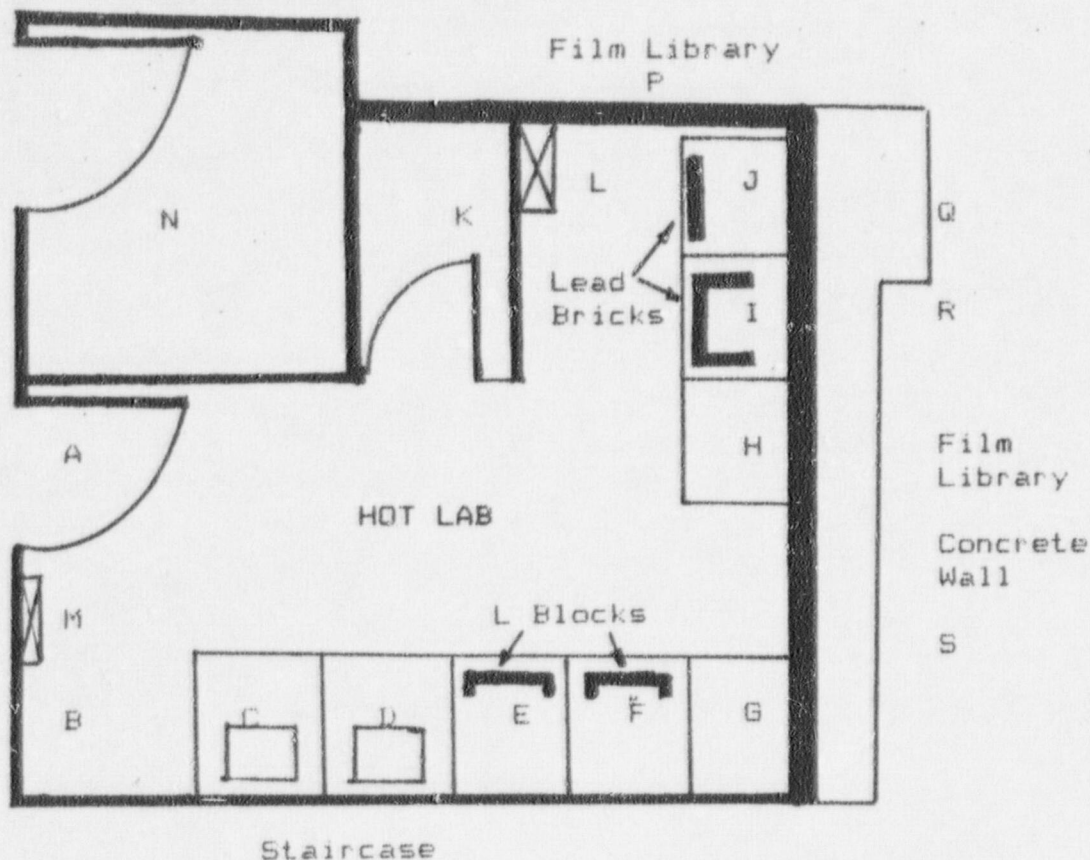
Date : TC

J Scan Room 5

Rm 5
Nuc med
J.
C.T.
8800

HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE HOT LAB



Scale : 1/4" = 1'0"
 3/16" lead
 1/16" lead

DAILY RADIATION SURVEY

Location	Max. Exposure Rate in mR/hr.	
	Above Counter	Below Counter
A. Entrance	.08	
B. Outpatient Injection Area	.07	
C. Cold Sink	.08	.04
D. Hot Sink, Hot Waste Cabinet for Tc	.20	.04
E. Dose Calibrator	.07	
F. Radiopharmaceutical Storage & Prep.	.03	
G. General Storage	.08	
H. Hot Waste Cabinet for long lived isotopes	.6	.2
I. Tc Generator	.04	
J. High Energy Sources	.08	
K. Shower	.12	
L. Exhaust Vent	.4	
M. Exhaust Vent	<0.1	
N. Patient Toilet	.13	
P. Film Library Cabinet	.02	
Q. Film Library	.03	
R. Film Library Desk	.03	
S. Film Library	.02	
T. Staircase	.01	

Instrument Used :

Corrective Action Needed ?

Yes No

Corrective Action Taken :

Initials :

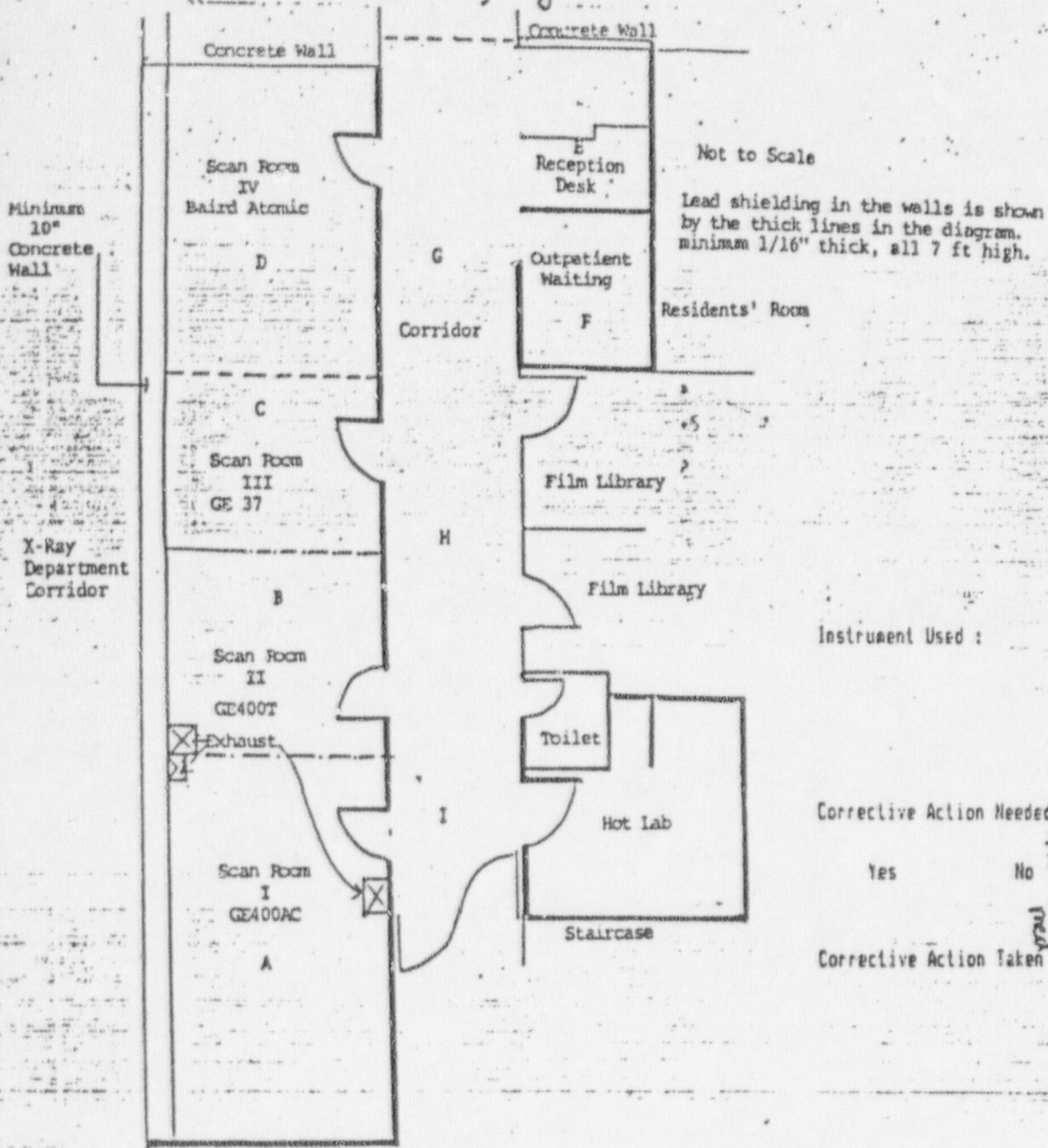
Date :

5/11/89

HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE DEPARTMENT

continuing diagram to Rt.



DAILY RADIATION SURVEY

Location	Maximum Exposure Rate in mR/hr.
A. Scan Room 1: G.E. 400 AC	2.1
B. Scan Room 2: G.E. 400 T	2.1
C. Scan Room 3: G.E. 37	2.1
Scan Room 4: Baird Atomic	2.1
E. Reception Desk	2.1
F. Outpatient Waiting Area	2.1
G. Corridor Near Waiting Areas	2.1
H. Corridor Near Film Library	2.1
I. Corridor Near Hot Lab	10.2

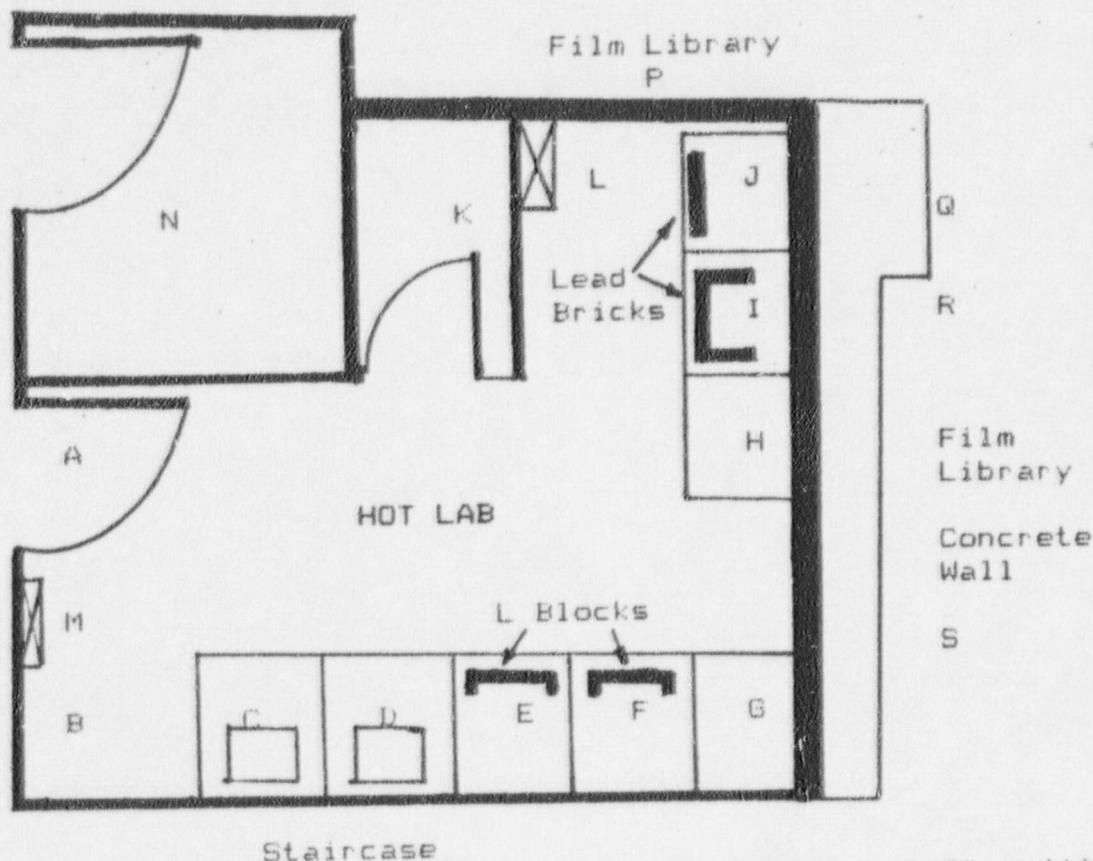
J. Scan Room 5

Initials: *W*

Date: *5/11/89*

HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE HOT LAB



Scale : 1/4" = 1'0"
 3/16" Lead
 1/16" lead

DAILY RADIATION SURVEY

Location	Max. Exposure Rate in mR/hr.	
	Above Counter	Below Counter
A. Entrance	.03	
B. Outpatient Injection Area	.03	
C. Cold Sink	.04	.08
D. Hot Sink, Hot Waste Cabinet for Tc	.12	.08
E. Dose Calibrator	.04	
F. Radiopharmaceutical Storage & Prep.	.08	
G. General Storage	.04	
H. Hot Waste Cabinet for long lived isotopes	.2	.2
I. Tc Generator	.03	
J. High Energy Sources	.05	
K. Shower	.10	
L. Exhaust Vent	.10	
M. Exhaust Vent	.10	
N. Patient Toilet	.10	
P. Film Library Cabinet	.08	
Q. Film Library	.08	
R. Film Library Desk	.08	
S. Film Library	.08	
T. Staircase	.01	

Instrument Used :

Corrective Action Needed ?

Yes No

Corrective Action Taken :

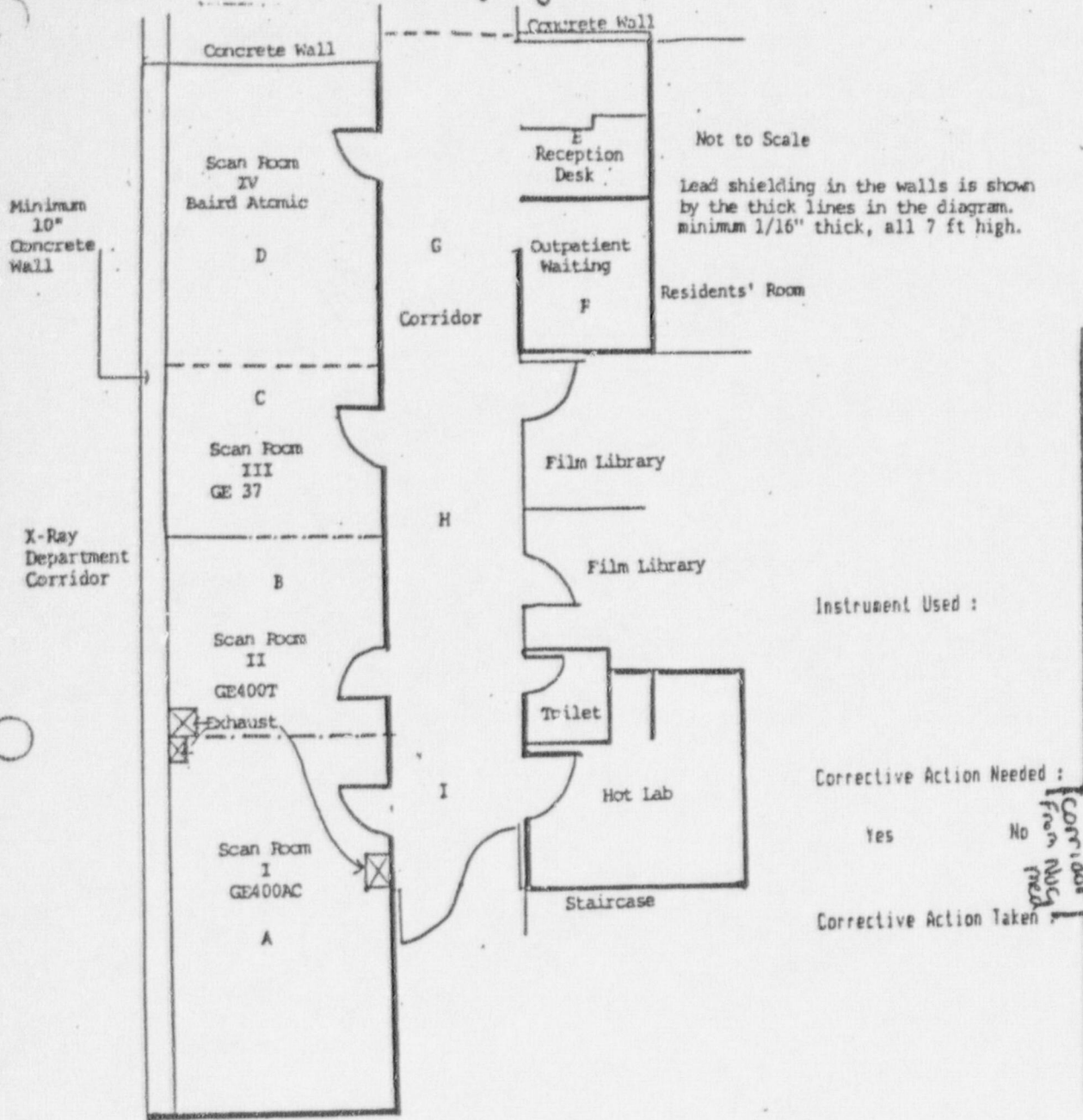
Initials :

Date :

AB
5/13

HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE DEPARTMENT *continuing diagram to Rt.*



DAILY RADIATION SURVEY

Location	Maximum Exposure Rate in mR/hr.
A. Scan Room 1 : G. E. 400 AC	1.04
B. Scan Room 2 : G. E. 400 T	
C. Scan Room 3 : G. E. 37	
D. Scan Room 4 : Baird Atomic	
E. Reception Desk	
F. Outpatient Waiting Area	
G. Corridor Near Waiting Areas	
H. Corridor Near Film Library	
I. Corridor Near Hot Lab	

J Scan Room 5

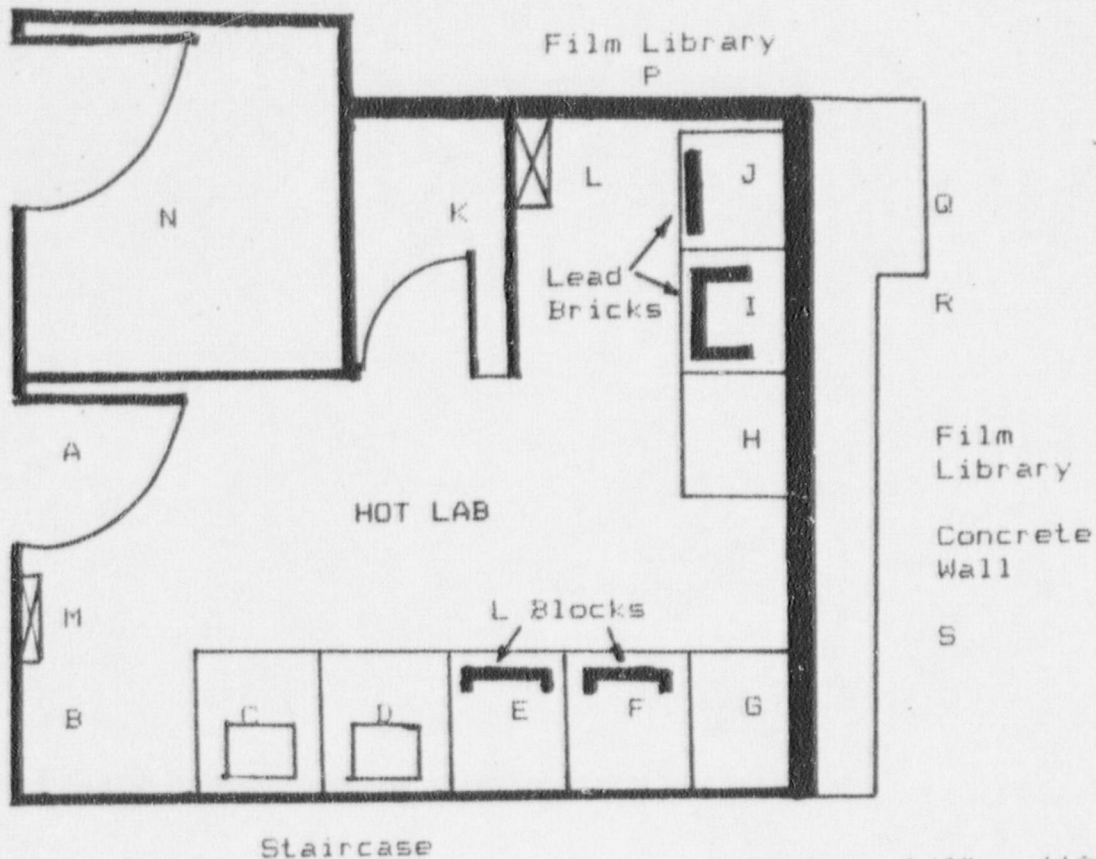
Initials : *fb*

Date : *5/13*

Saturday

HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE HOT LAB



Scale : 1/4" = 1'0"
 3/16" lead
 1/16" lead

DAILY RADIATION SURVEY

Location	Max. Exposure Rate in μ R/hr.	
	Above Counter	Below Counter
A. Entrance	1.08	
B. Outpatient Injection Area	1.08	
C. Cold Sink	1.03	1.02
D. Hot Sink, Hot Waste Cabinet for Tc	1.0	1.02
E. Dose Calibrator	1.04	
F. Radiopharmaceutical Storage & Prep.	1.02	
G. General Storage	1.04	
H. Hot Waste Cabinet for long lived isotopes	1.2	1.2
I. Tc Generator	1.03	
J. High Energy Sources	1.05	
K. Shower	1.10	
L. Exhaust Vent	1.2	
M. Exhaust Vent	1.01	
N. Patient Toilet	1.2	
P. Film Library Cabinet	1.02	
Q. Film Library	1.02	
R. Film Library Desk	1.02	
S. Film Library	1.02	
T. Staircase	1.01	

Instrument Used :

Corrective Action Needed ?

Yes No

Corrective Action Taken :

Initials :

Date :

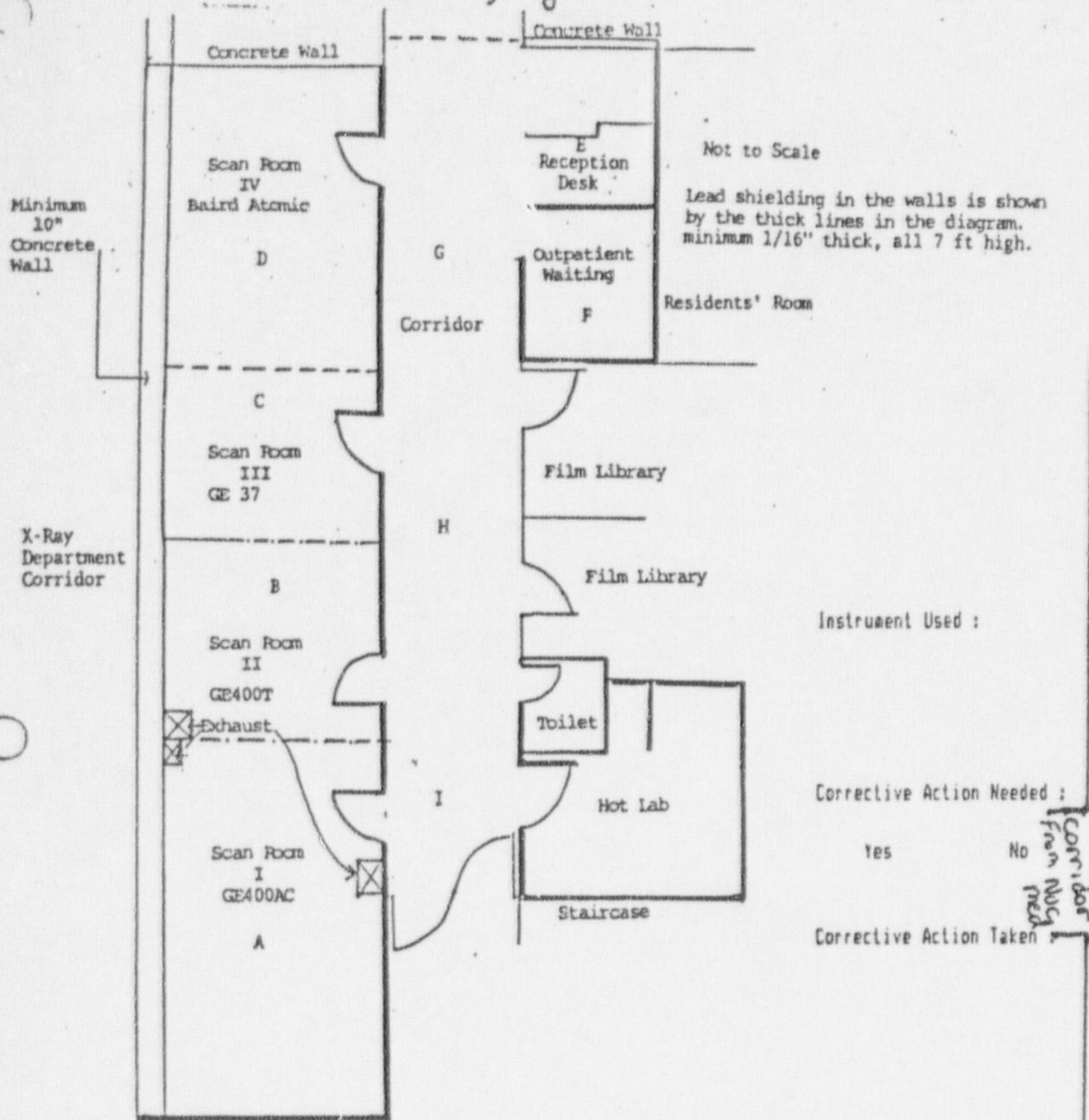
TC

5/14

HACKENSACK MEDICAL CENTER

FACILITY DIAGRAM FOR NUCLEAR MEDICINE DEPARTMENT

continuing diagram to Et.



DAILY RADIATION SURVEY

Location	Maximum Exposure Rate in mR/hr.
A. Scan Room 1 : G.E. 400 AC	0.02
B. Scan Room 2 : G.E. 400 T	
C. Scan Room 3 : G.E. 37	
D. Scan Room 4 : Baird Atomic	
E. Reception Desk	
F. Outpatient Waiting Area	
G. Corridor Near Waiting Areas	
H. Corridor Near Film Library	
I. Corridor Near Hot Lab	

J Scan Room 5

Initials : TL

Date : 5/14

Sunday

Rm 5
Nuc med
J.
C.T.
8800

Package Receipt Surveys

ORDERING AND RECEIVING LOG

[illegible]

Date of Receipt	5-3								→			5-3	5-3
Condition of Package	Good								→			→	→
Survey at 3 feet m/f/hr.	0.6								→			0.2	3.0
Survey of Surface m/f/hr.	2.0								→			0.7	17.0
Wipe of External Package	68	68	69	72	70							68	75
Wipe of Internal Package	70	69	70	74	71							70	80
Wipe of Ex. Pack. D.P.M.	77	77	78	81	79							79	84
Wipe of Int. Pack. D.P.M.	79	78	79	83	80							79	91
BACKGROUND D.P.M.	67												→
Initials	mm								→				→
Action Taken	None								→				→

ORDERING AND RECEIVING LOG

Date of Receipt	5-11-89
Condition of Package	Good
Survey at 3 feet mR/Hr.	.2
Survey of Surface mR/Hr.	1.0
Wipe of External Package	65 66 65 65 63
Wipe of Internal Package	67 68 69 70 70
Wipe of Ex. Pack. D.P.M.	73 74 73 73 71
Wipe of Int. Pack. D.P.M.	75 76 77 78 78
BACKGROUND D.P.M.	80 80 80 80 80
Initials	TU
Action Taken	none

ORDERING AND RECEIVING LOG

[illegible][illegible]

Dose Calibrator Constancy Checks

Dose Calibrator Chec

Acceptable
Variation

94.4
89.92
85.7

Activity in microcuries

10
9
8
7
6
5
4
3
2

3/30

4/11

4/23

5/5

5/17

5/29

6/10

6/22

7/4

7/16

7/28

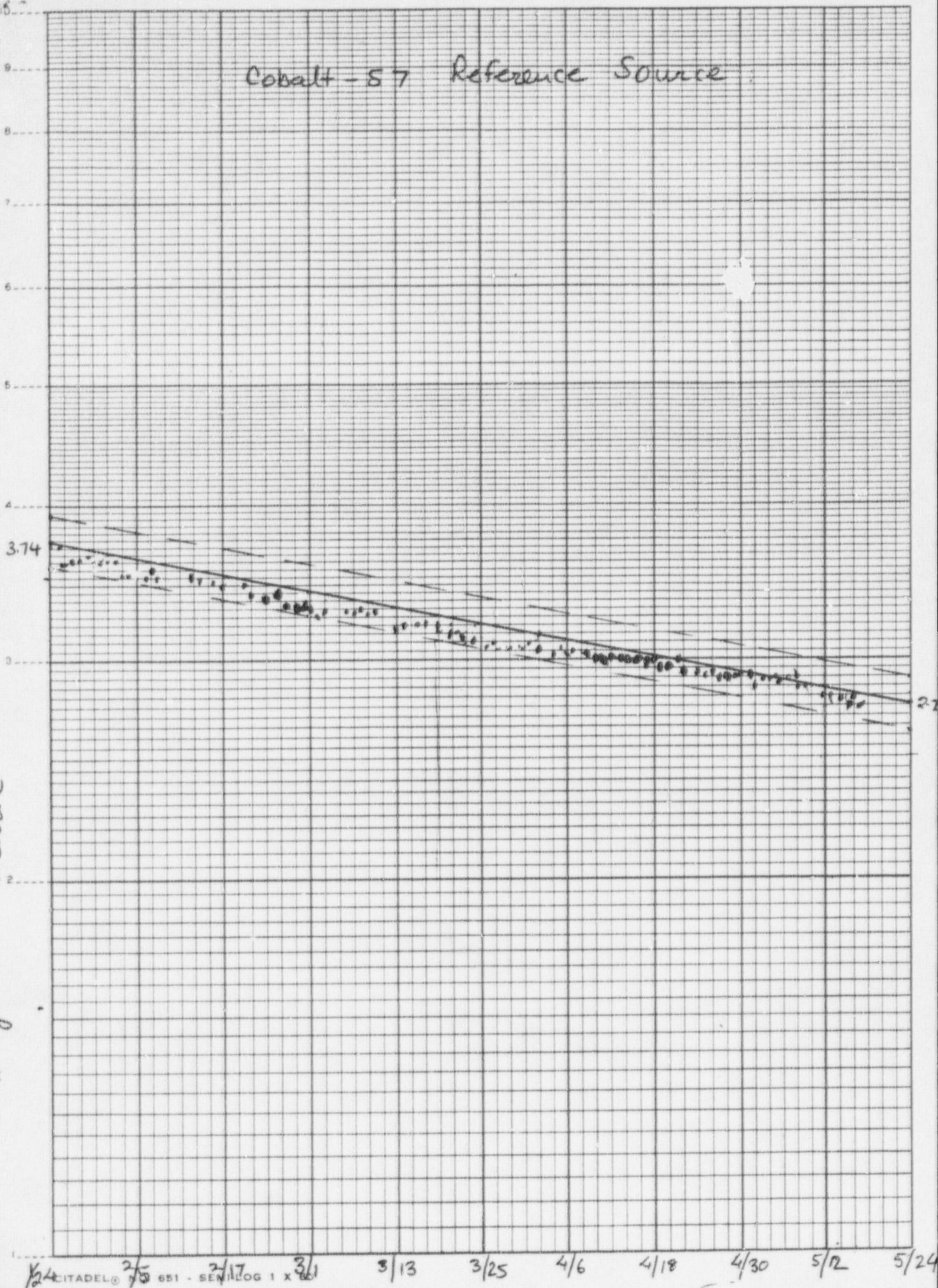
CITADEL® NO. 651 - SEMI-LOG 1 X 60

Dates

Cobalt-57 Reference Source

Acceptable
variation

Activity in millicurie



NUCLEAR MEDICINE DEPARTMENT

Month : May 19 89

Date	Ini.	Cs-137 220	Tc-99m 280	Ga-67 094	I-131 151	I-1201 205	I-123 277	In-111 303
5-8-89	TC	88.7	163	145	114	93	74	69
5-9-89	TC	87.8	163	144	114	93	73	68
5-10-89	TC	88.5	162	145	113	92	74	69
5-11-89	TC	87.6	163	145	114	93	74	69
5-12-89	TC	88.6	163	144	114	93	74	69
5-13-89	TC	88.5	162	145	114	93	74	69
5-14-89	TC	88.6	163	144	113	93	74	68
5-15-89	(AY)	88.7	163	145	114	93	76	71
5-16-89	(AY)	88.9	163	145	114	93	75	70
5-17-89	pb	88.8	164	146	115	94	75	70