

mpmp

MID-PACIFIC MEDICAL PHYSICS

1301 Punchbowl Street, Suite 307
Honolulu, Hawaii 96813
Phone (808) 536-2774



RECEIVED
NRC

1985 SEP -6 AM 11:07

REGION VICE

September 3, 1985

B. A. Riedlinger
Health Physicist (Licensing)
Materials Radiation Protection
Inspection & Licensing Section
U.S. Nuclear Regulatory Commission
Region V
1450 Maria Lane, Suite 210
Walnut Creek, CA 94596

RECEIVED
9/13/85
Sept 14
8
9/17/85

Dear Ms. Riedlinger:

Enclosed please find a report of our decommissioning effort in the old Nuclear Medicine facility at The Queen's Medical Center. As per the conditions of NRC License No. 53-16533-02, your office must approve the enclosed before unrestricted use of the area is permitted. As the area is to be modified, the licensee is anxious to initiate minor construction changes in this area.

Your consideration of this will be extremely appreciated. If you should have any questions, please call me.

Sincerely,

Don Tolbert, Ph.D.
Radiation Safety Officer

DDT:lma

cc: Calvin Ichinose, President
Ancillary Support Services - QMC
Division of Fuel Cycle and Material Safety
Washington D.C.

8510310061 850927
REG5 LIC30
53-16533-02 PDR

FEE EXEMPT

Continuation
of 70147

Rec'd LFMB
9/13/85

70255

DECOMMISSIONING SURVEY REPORT

Preface

The following is a report of a decommissioning effort on behalf of NRC License No. 53-16533-02. The premises referred to below is that portion of the third floor of the Bishop Wing at The Queen's Medical Center previously occupied by the Nuclear Medicine Department. See Figures 1 thru 5 for detailed floor plans of the premises.

Scope and Procedures of Survey and Wipe Tests

The premises were surveyed on August 14, 15, and September 3 of 1985. A Victoreen Survey Meter (Model 490, Serial No. 2900) with a Pancake Probe (Model 489-110, Serial No. 124) was used for the survey of the facility. The Cs-137 efficiency of this instrument is 0.63%. The instrument was last calibrated on 6/28/85. The criteria used is that specified in the July, 1982 issue of "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of License for By-Product, Source, or Special Nuclear Material."

All floor surfaces, and fixtures such as sink, toilet, shelves, and exhaust gratings were surveyed. Wipe specimens were taken in 42 locations. Wipes were taken with 2.3 cm circles of medium weight filter paper. The wipes were made over 100 sq. cm. area using moderate pressure. Wipes were taken of all sink drains, all imaging room exhaust vents, and the floor area under all imaging consoles. The locations of the wipes are indicated on Figures 1 - 5. The circled numbers are the locations of the wipes. In addition, a list of the locations of the wipes is provided in Figure 4. The wipes were counted in Beta and Gamma counters. The Beta counter was a Nuclear Chicago GM detector and scaler. The Gamma counter, a Nuclear Chicago scintillation well and Canberra multi-channel analyzer. All wipes were counted in both the Beta and Gamma detector and no wipes registered above background level.

Summary of the Findings of the Survey

There was only one area above background level found. This area of fixed contamination was located in Room 4 on the sideboard of the stainless steel sink and registered a maximum of 650 net counts per minute (cpm) on 8/14/85. This value had decayed to 300 net cpm seven days later and on 9/3/85, the net cpm was 64. This corresponds to almost 10,200 dpm on 9/3/85.

Based on this decay information, the half-life of the fixed contamination is approximately 5.7 days (See Figure 6). Other efforts were made to identify the isotope by taking repeated wipes and analyzing them in the multi-channel analyzer. A total of 5 wipes were taken with increasing amounts of pressure and none of these wipes revealed any counts above background. Consequently, a spectrum analysis of the isotope was not possible.

According to the data shown in Figure 6, the dpm for the area above background will have reached 5,000 dpm or less by September 12, 1985. According to the conditions of NRC License No. 53-16533-02, unrestricted use must await approval by the Region V NRC office. This will probably be subsequent to September 12, 1985, but in any case, a final survey will confirm that activities are below those specified in the guideline referenced under "Scope and Procedures of Survey and Wipe Tests."

REMOVE EXISTING WINDOWS
BLOCK OPEN'GS W/ GEN FLASTER.
ALTERNATE 1

EXAM
SCANNING ROOM

2

38

10

EXAM

1

2
A9

8'-0"

EXIST. CLG.

EXIST. CLG.

8'-0"

PASS
E2A

WAIT
F2A

1
A9

GAMMA CAMERA ROOM

WAIT
F2B

H. LAB
E5B

4C
15

N140

N141

N142

2'-8"

LABORATORY

7'-6" CLEAR

HOT ROOM

19F

MA2
F2B

11E
16

EXIST. CLG.

8'-0"

PASS
E2A

Bathroom

NEW WALL
MOUNTED LAV.

RECEP.

9

Darkroom

8

1
A9

5'-6 1/2"

11'-3"

70055

Figure 2 QMC 3rd floor Bishop Wing old nuclear medicine dept. facility

BLOCK CHANGES W/72
ALTERNATE 1

PROVIDE COUNTER
END SUPPORT

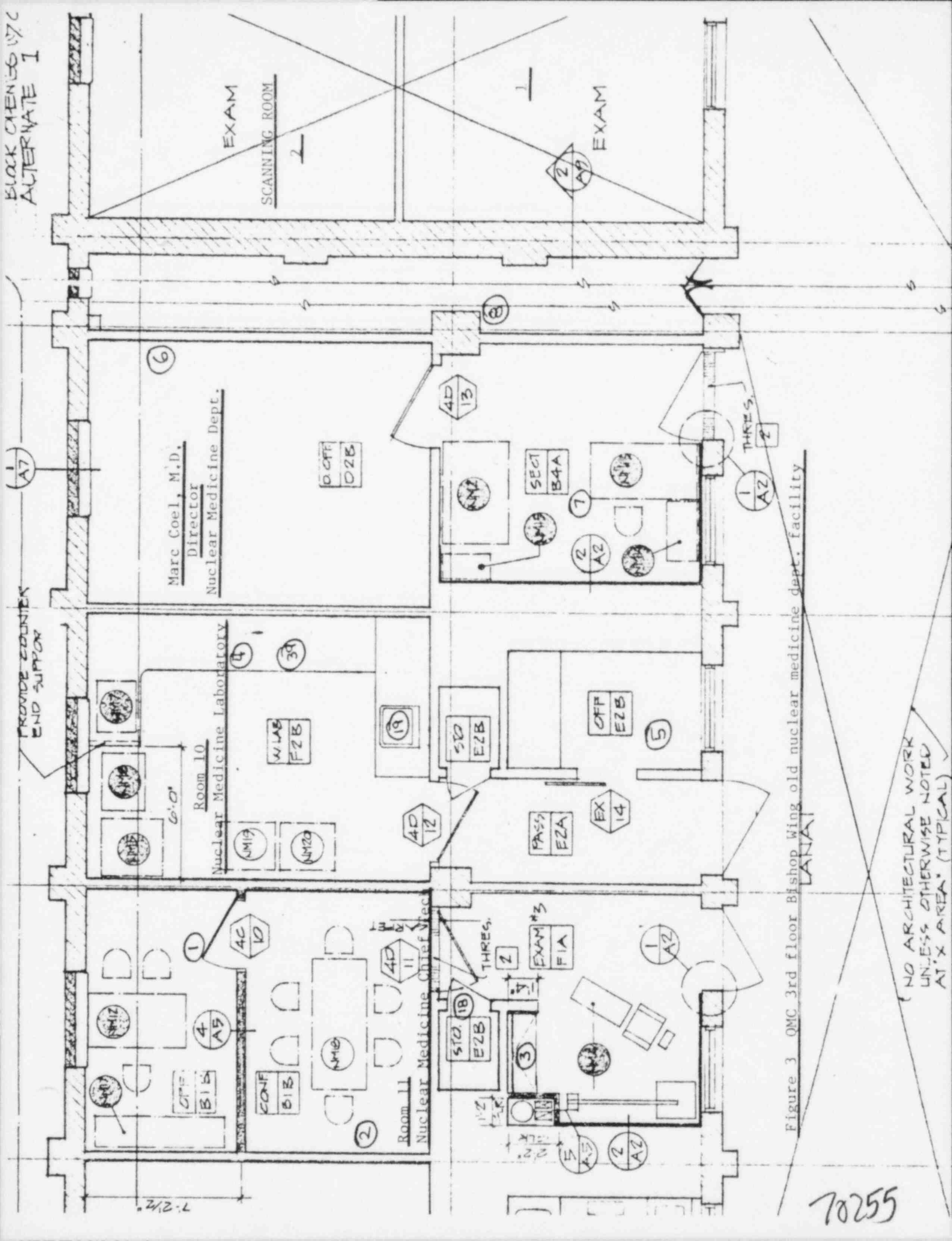
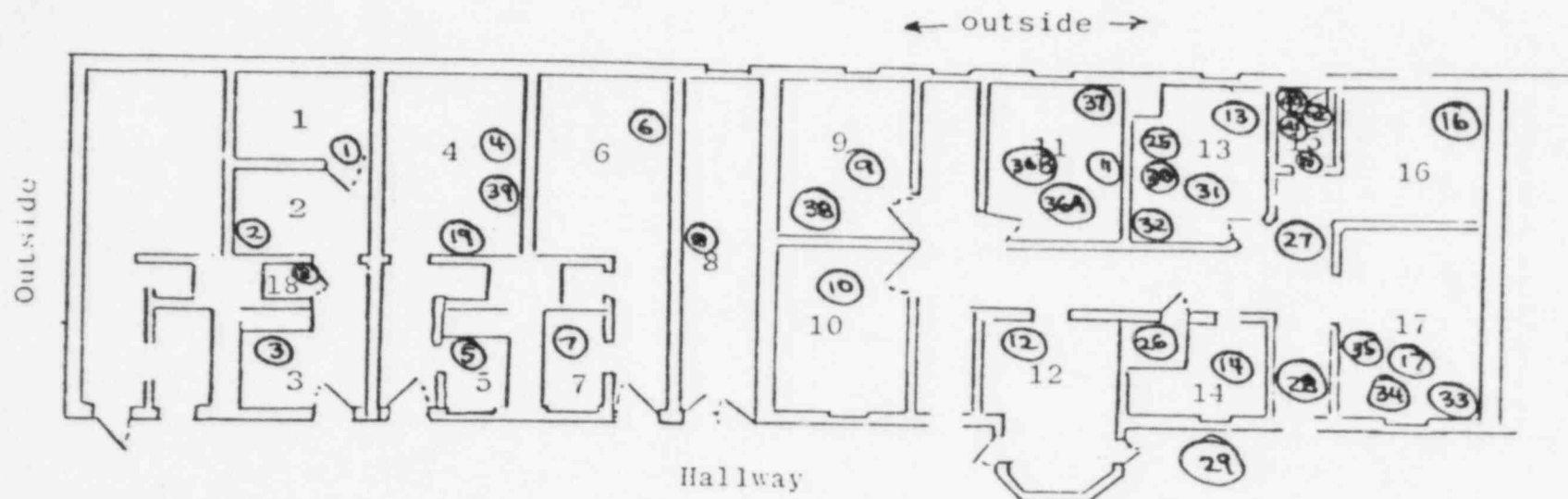


Figure 3 QMC 3rd floor Bishop Wing old nuclear medicine dept. facility

NO ARCHITECTURAL WORK
UNLESS OTHERWISE NOTED
AT 'X' AREA* (TYPICAL)

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NUCLEAR MEDICINE RIA
BISHOP III



Wipe no.	Location	Wipe no.	Location
1.	Chief Technologists office	25.	Sink in #13
2.	Lounge/conference area	26.	Sink in bathroom
3.	Thyroid uptake area	27.	Hallway outside #15
4.	RIA laboratory	28.	Hallway inside entrance
5.	Secretary's office	29.	Hallway in unrestricted area
6.	Nuclear Medicine Directors office	30.	Sink sideboard in #13
7.	Secretary's office	31.	Floor under console in #13
8.	Radioactive waste/file storage	32.	Exhaust vent in #13
9.	Total body scanner studies	33.	Exhaust vent in #17
10.	Gamma camera studies	34.	Floor under console in #17
11.	Xenon/Gamma camera studies	35.	Shelf in #17
12.	Reception area	36.A&B.	Floor under consoles in #11
13.	Xenon/Gamma camera studies	37.	Exhaust vent in #11
14.	Utility and film processor area	38.	Floor under console in #9
15.	Hot lab	39.	Workbench in #4
16.	Computer room	40.	Fume hood duct in #15
17.	Xenon/Cardiac treadmill studies	41.	Floor under dose prep. area in #15
18.	Radioactive waste storage closet	42.	Counter surface in #15
19.	Sink in laboratory		
20.	Background filter paper		
21,22,23,24.	Roof exhaust stacks		

Figure 4 QMC 3rd floor Bishop Wing old nuclear medicine dept facility

HOT ROOM

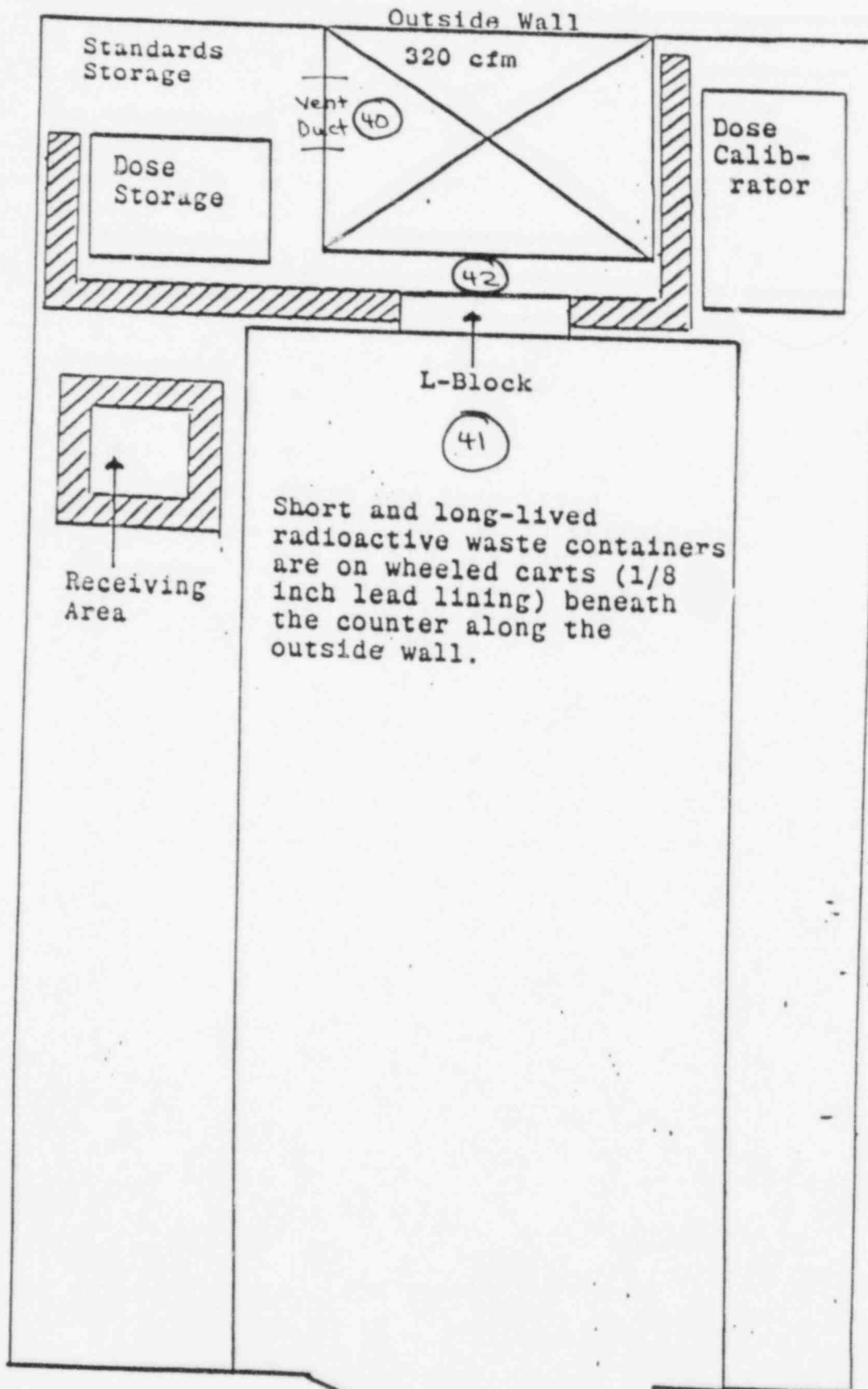


Figure 5 QMC 3rd floor Bishop Wing old nuclear medicine dept.

Item 11-5
Date: 1/30/85

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46 4970

K&E SEMI-LOGARITHMIC • 1 CYCLES X, 20 DIVISIONS
KEUFFEL & ESSNER CO. MADE IN U.S.A.

Fraction Remaining (x0.1)

Days

Isotope X

Old Nm Facility (Bishop III)

The Queen's Medical Center

Estimated Half-Life = 5.9 days

Figure 6

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