

CARILION

Roanoke Memorial
Hospital

September 23, 1996

U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street
Atlanta, GA 30303

SUBJECT: Exit Radiation Survey of Rooms and Areas Vacated by Nuclear
Medicine Department

REF: Letter to USNRC dated 4/10/96 regarding Amendment No. 80
request approved 5/17/96 for RAM License No. 45-01291-02,
Docket No. 030-03307

Gentlemen:

On September 18, 1996, the rooms and areas vacated by the Nuclear Medicine Department located on the 3rd floor, East Pavilion of the main hospital complex of Carilion Roanoke Memorial Hospital, Belleview at Jefferson Street, Roanoke, VA, were surveyed by Radiation Safety Personnel for residual radioactive contamination. Wipes of random floor sites, sinks, toilets, door knobs, light switches, window air conditioners, counters and cabinets were obtained and evaluated for any removable surface radioactive contamination.

Also, ambient exposure rates in each room and area were measured.

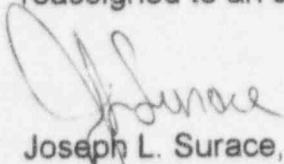
Summary of Findings:

1. All ambient exposure rates within the rooms and areas were at background levels of between 0.01 to 0.02 mR/h.

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2. All wipes from sites within rooms and areas were within background levels of 422 dpm +/- 62 dpm.

No areas of radioactive contamination were identified and this room and area has been reassigned to an unrestricted general use area.



Joseph L. Surace, M.S.
Radiation Safety Officer

Attachments (2)

pc: Mike Ballantyne
Vice President

Sharon Whetzel, Manager
Diagnostic Imaging Services - Roanoke

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RADIATION SURVEY

Location: 3rd Floor, East Pavilion - CRMH, previously used by Nuclear
Medicine Department.

Date of Survey: 9/18/96

Surveyors: Margie H. Dodd & Jeffrey G. Messinger
Department of Physics

Instruments:

Survey Meter: Mfg. Victoreen Model 491 Serial 3103

GM Detector Mfg. Victoreen Model GM-491-30 Serial 3586

Calibration Date: 4/8/96

Well Counter: Mfg. Canberra Model 2802 Serial 2901049

Nal Detector: Mfg. Bicron Model 2MW313 Serial 30-330

Reference Source: Isotope Co-57 Calibration Info. 8.1 μ Ci, 11/24/87

Mfg. NEN-Dupont Model NES 137T Serial NES-137T-112487

Diagram of area surveyed and survey sites. See attached sheets for

- 1.) ambient radiation exposure rate and
- 2.) radiation surface contamination survey

Ambient Exposure Rates

LOCATION: 3rd floor, East Pavilion - CRMH, rooms & areas vacated by Nuclear
Medicine Dept. on 9/9/96

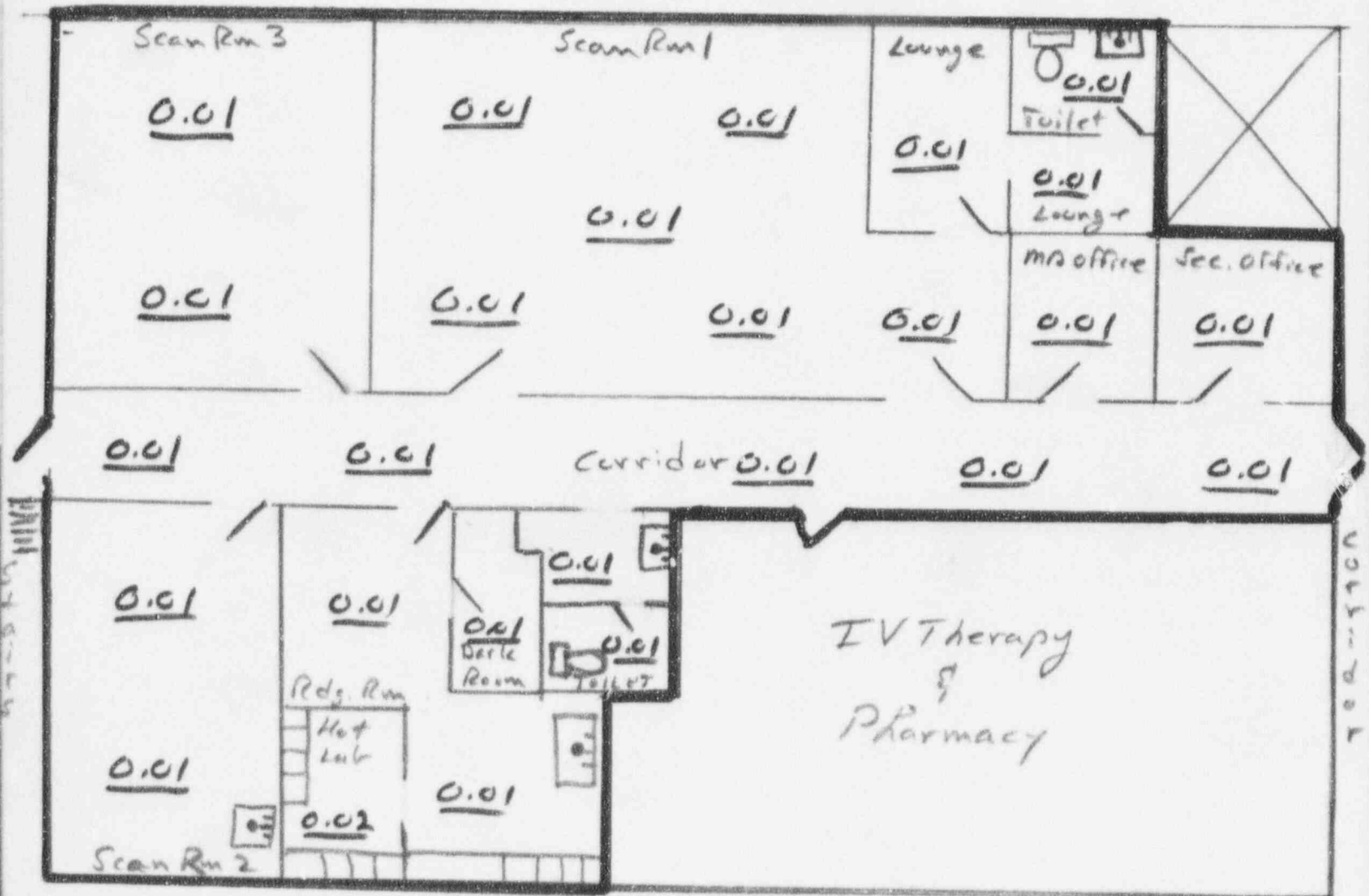
Survey Date: 9/18/96 *JH Messinger*

Surveyors: M. Dodd & J. G. Messinger, Department of Physics - CRMH

Readings: All are in units of mR/h at sites noted in diagram below

Max. Rdg: 0.02 mR/h Meter Bkgrd. Rdg: 0.015 mR/h

Trigger Level: 0.02mR/h



RADIATION SURVEY SHEET - Surface Contamination Wipe Sites

Location: 3rd floor, East Pavilion - CRMH, rooms & areas vacated by Nuclear Medicine Dept. on 9/9/96

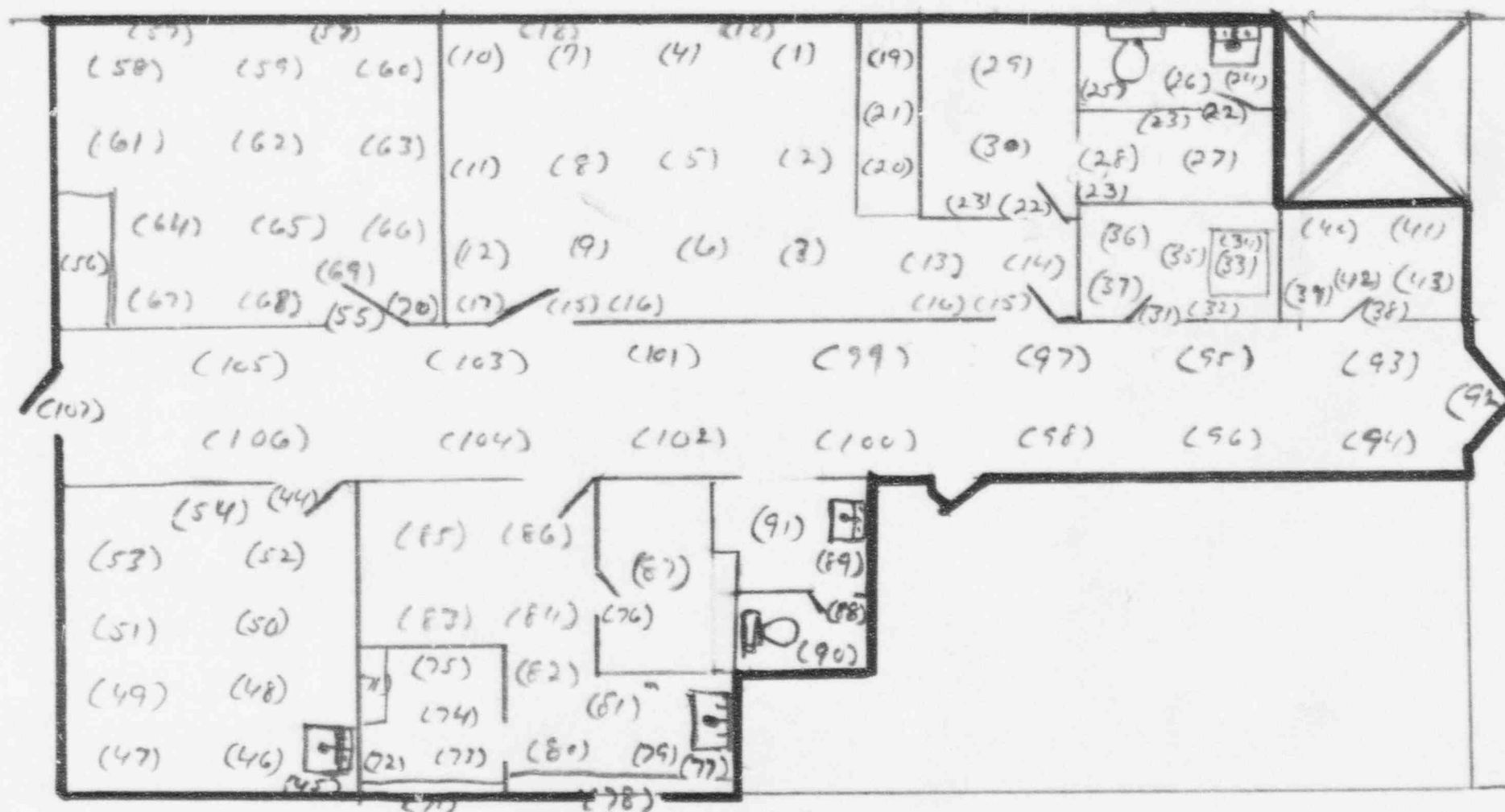
Survey Date: 9/18/96

Surveyors: M. Dodd & J.G. Messinger, Dept. of Physics - CRMH

Rdgs. are all in net dpm Background rate: 422 cpm +/- 62 cpm MCA counting system efficiency: 0.99 dpm/cpm

Trigger Level: Net wipe Rdgs. exceeding 62 dpm (2.91E-5uCi)

J.G. Messinger



WIPE LOCATION	NET READING (dpm)	STATUS
A - Scan Rm 1		
1 - Floor	-20	Background
2 - Floor	-41	Background
3 - Floor	-29	Background
4 - Floor	4	Background
5 - Floor	1	Background
6 - Floor	-11	Background
7 - Floor	-8	Background
8 - Floor	19	Background
9 - Floor	-17	Background
10 - Floor	-5	Background
11 - Floor	-11	Background
12 - Floor	-17	Background
13 - Floor	7	Background
14 - Floor	-23	Background
15 - Doors	-35	Background
16 - Light Switches	-14	Background
17 - Telephone	7	Background
18 - A/C Units	10	Background
19 - Work Counter	-8	Background
20 - Work Counter	-20	Background
21 - Cabinets	10	Background

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WIPE LOCATION	NET READING (dpm)	STATUS
B - Staff Lounge Area		
22 - Doors	-8	Background
23 - Light Switches	-20	Background
24 - Sink (toilet)	-20	Background
25 - Floor (toilet)	-11	Background
26 - Floor (toilet)	-14	Background
27 - Floor	13	Background
28 - Floor	25	Background
29 - Floor	-2	Background
30 - Floor	-23	Background
C - MD Office		
31 - Doors	-17	Background
32 - Light Switches	31	Background
33 - Desk	16	Background
34 - Telephone	37	Background
35 - Floor	25	Background
36 - Floor	-23	Background
37 - Floor	-5	Background
D - Secretary Office		
38 - Door & Light Switches	-17	Background

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WIPE LOCATION	NET READING (dpm)	STATUS
39 - Intercom	-2	Background
40 - Floor	-11	Background
41 - Floor	-35	Background
42 - Floor	4	Background
43 - Floor	7	Background
E -Scan Rm 2		
44 - Door & Light Switches	-17	Background
45 - Sink	22	Background
46 - Floor	-26	Background
47 - Floor	19	Background
48 - Floor	-11	Background
49 - Floor	25	Background
50 - Floor	-2	Background
51 - Floor	22	Background
52 - Floor	22	Background
53 - Floor	13	Background
54 - Floor	28	Background
F -Scan Rm 3		
55 - Door & Light Switch	7	Background
56 - Work Counter	16	Background

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WIPE LOCATION	NET READING (dpm)	STATUS
57 - A/C Units	19	Background
58 - Floor	-35	Background
59 - Floor	-8	Background
60 - Floor	-20	Background
61 -Floor	-17	Background
62 -Floor	19	Background
63 - Floor	-11	Background
64 - Floor	16	Background
65 - Floor	10	Background
66 - Floor	-14	Background
67 - Floor	7	Background
68 -Floor	-11	Background
69 -Floor	-17	Background
70 -Floor	31	Background
G - Hot Lab		
71 - Cabinets	13	Background
72 - Floor	-8	Background
73 - Floor	16	Background
74 - Floor	-2	Background
75 - Floor	-20	Background

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WIPE LOCATION	NET READING (dpm)	STATUS
H - Reading Rm		
76 - Door & Light Switches	-35	Background
77 - Sink	-8	Background
78 - Counters	-11	Background
79 - Floor	-38	Background
80 - Floor	-20	Background
81 - Floor	7	Background
82 - Floor	4	Background
83 - Floor	10	Background
84 - Floor	-8	Background
85 - Floor	10	Background
86 - Floor	-26	Background
I - Dark Room		
87 - Door & Light Switches	4	Background
88 - Floor	10	Background
J - Patient Toilet		
89 - Sink	-17	Background
90 - Floor	-2	Background
91 - Floor	31	Background
K - Corridor		
92 - Doors	25	Background

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WIPE LOCATION	NET READING (dpm)	STATUS
93 - Floor	-14	Background
94 - Floor	-5	Background
95 - Floor	28	Background
96 - Floor	25	Background
97 - Floor	25	Background
98 - Floor	-8	Background
99 - Floor	-2	Background
100 - Floor	13	Background
101 - Floor	-5	Background
102 - Floor	16	Background
103 - Floor	19	Background
104 - Floor	-29	Background
105 - Floor	-17	Background
106 - Floor	1	Background
107 - Floor	16	Background

JS