



Reid Hospital
& Health Care Services

October 6, 2008

Materials Licensing Section
U.S. Nuclear Regulatory Commission,
Region III
2443 Warrenville Road, Suite 210
Lisle, Illinois 60532-4352

Dear Sir or Madam:

We are requesting an amendment to NRC License Number 13-03284-02 for Reid Hospital & Health Care Services.

We are requesting to delete the 1401 Chester Boulevard address of use. Enclosed is a close-out survey of the 1401 Chester Boulevard address of use.

If there are any questions concerning this, please contact:

Mr. Patrick J. Byrne, D.A.B.R., C.H.P., Consultant, Phone: 877-317-5811

Eugene DiTullio, Director of Radiology Services, Phone: 765-983-3166

Charles Narayanan, Radiation Safety Officer, Phone: 765-983-3168

Sincerely,

Eugene DiTullio
Eugene DiTullio
Director of Radiology Services

RECEIVED OCT 14 2008

Close-out survey of 1401 Chester Boulevard, Richmond, Indiana 47374

Performed by: Erin Lambert, B.S.
Medical Physics Consultants, Inc.

Date Performed: September 10, 2008

The close-out survey of the 1401 Chester Boulevard address of use included five separate areas:

1. nuclear medicine department imaging room
2. nuclear medicine department Hot Lab
3. nuclear medicine treadmill testing room
4. nuclear medicine department attic storage room
5. radiation oncology Hot Lab

Radioactive material usage in the nuclear medicine imaging room and nuclear medicine Hot Lab was limited to the use of materials licensed under 10 C.F.R. 35.100, 35.200, and 35.300. The attic storage room was used to store radioactive wastes from the nuclear medicine department. The treadmill testing room usage was limited to the use of materials licensed under 10 C.F.R. 35.100 and 35.200 in the performance of diagnostic cardiac studies. The radiation oncology Hot Lab was used to receive and store materials licensed under 10 C.F.R. 35.400, specifically Cesium-137 and I-125 sealed sources.

Wipe tests for removable radioactive contamination were taken on 09/10/08 and analyzed in a Ludlum Model 243 (S/N: 145366) Shielded Well Scintillator coupled to a Ludlum Model 2200 (S/N: 138705) Scaler Ratemeter. A window of 50 to 400 keV was used to analyze the wipes. The efficiency of this system for Cobalt-57 is 1.14 dpm/cpm and for Cesium-137 it is 7.16 dpm/cpm, using the 50 to 400 keV energy window.

The radiation levels survey was performed on 09/10/08 by Erin Lambert, using a Ludlum Model 14C Geiger-Muller survey meter (S/N: 230348) with a pancake probe. The meter was calibrated on 03/26/08. The range used for the radiation level survey was 0.0 to 0.2 mR/hr.

Visual Inspection

The areas of use were visually inspected to ensure that all radioactive materials and wastes had been removed. No radioactive materials or wastes were located in the areas.

Radiation Level Survey

No area demonstrated radiation levels in excess of the background reading of 0.03 mR/hr.

Sealed Sources

All sealed sources were moved to the 1100 Reid Parkway address of use, prior to the close-out survey being conducted. No sealed source had ever been found to be leaking. Enclosed are copies of the results of the last leak tests performed on the sealed sources prior to the move.

Removable Contamination Survey Results

Wipe samples were counted in a Ludlum Model 243 Shielded Well Scintillator (S/N: 145366) coupled to a Ludlum Model 2200 Scaler Ratemeter (S/N: 138705). The efficiency of this system for Cobalt-57 is 1.14 dpm/cpm and for Cesium-137 it is 7.16 dpm/cpm with the energy window set to 50 to 400 keV.

Background: 285 counts per minute

Wipe Number	Gross counts per minute	Net counts per minute	Disintegrations per minute
1	280	0	0
2	265	0	0
3	295	10	11.4
4	277	6	6.84
5	281	0	0
6	266	0	0
7	275	0	0
8	241	0	0
9	291	6	6.84
10	308	23	26.22
11	277	0	0
12	272	0	0
13	263	0	0
14	260	0	0
15	268	0	0
16	257	0	0
17	277	0	0
18	266	0	0
19	270	0	0
20	296	11	12.54
21	270	0	0
22	291	6	6.84
23	267	0	0
24	260	0	0
25	258	0	0
26	251	0	0
27	258	0	0
28	269	0	0
29	264	0	0
30	297	12	13.68
31	306	21	23.94
32	268	0	0
33	237	0	0
34	294	9	10.26
35	279	0	0
36	264	0	0
37	273	0	0

38	277	0	0
39	302	17	121.72+
40	291	6	42.96+
41	271	0	0+
42	318	33	236.28+
43	272	0	0+
44	264	0	0+

*Please refer to the attached survey map for wipe locations.

+The efficiency conversion factor of 7.16 for Cesium-137 was used for these wipes as the area primarily used Cesium-137 sources.

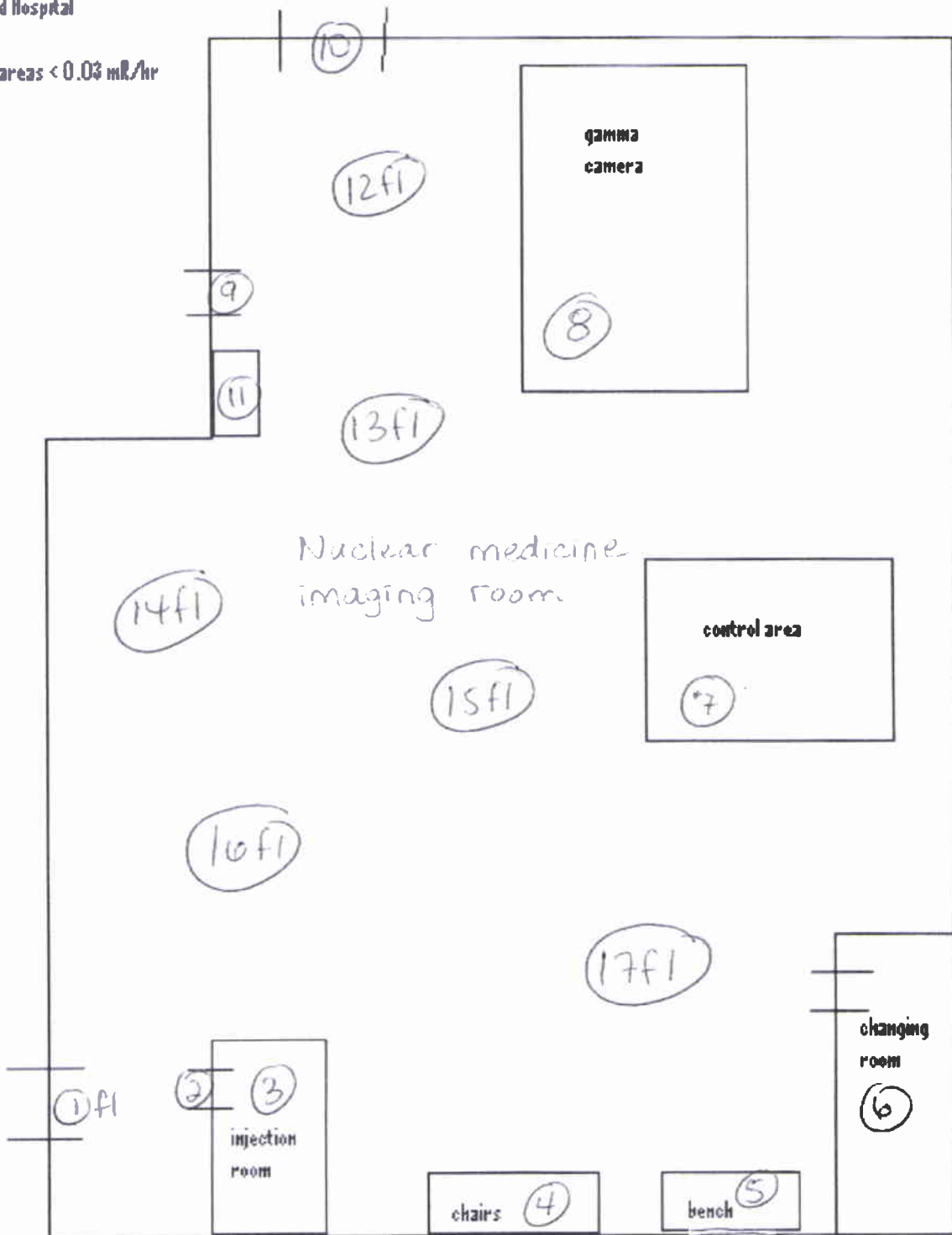
Maximum removable contamination occurred in area 42. Gross count rate = 318 cpm/100cm². Net count rate (gross minus background) = 318 – 285 = 33 cpm/100cm². Net removable disintegrations per minute = 33 cpm/100cm² x 7.16 dpm/cpm = 236.28 dpm/100cm².

Conclusion

As of 09/10/08, all radioactive materials have been removed from the areas of use and no removable contamination is present.

Imaging Room
Reid Hospital

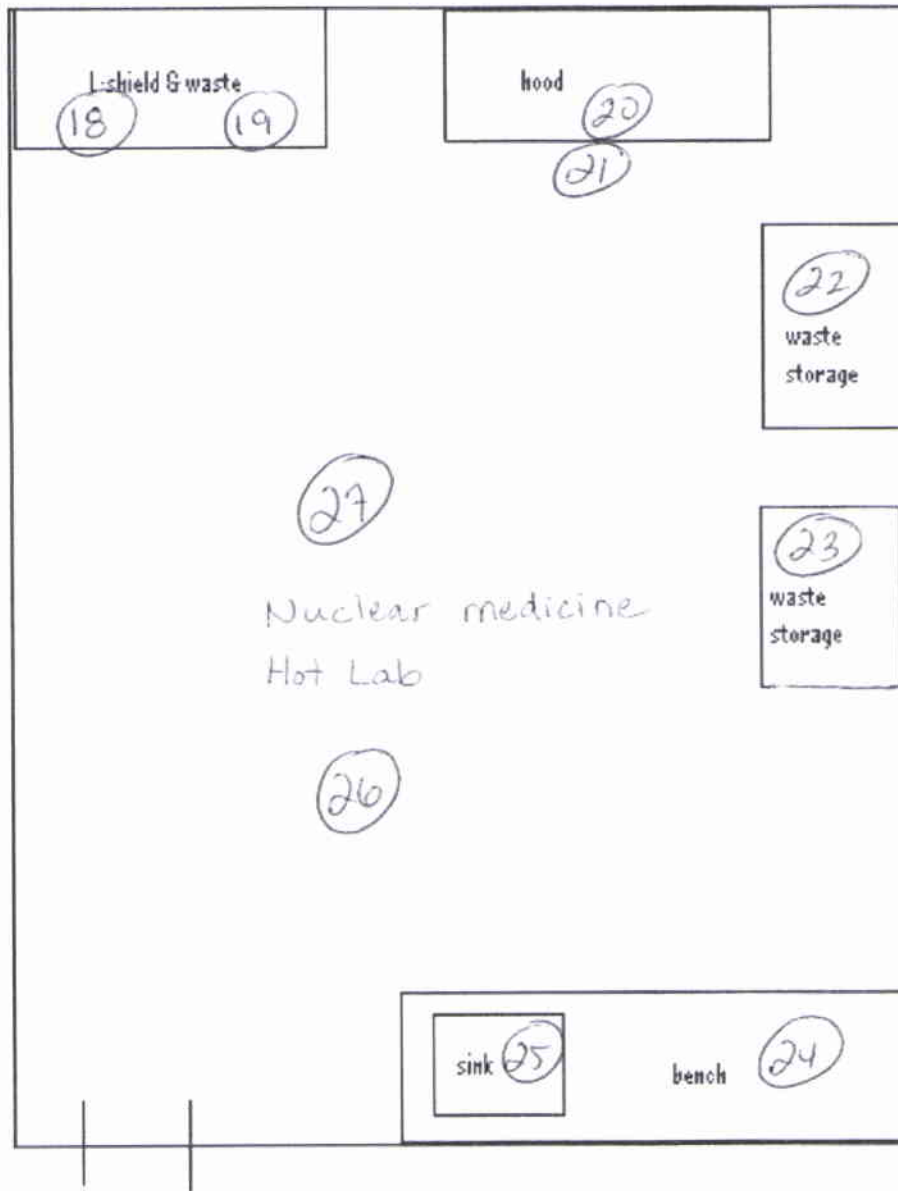
all areas < 0.03 mR/hr



Circled numbers refer to wipe sample numbers.
fi = wipe sample taken on floor

Hot Lab - Reid Hospital

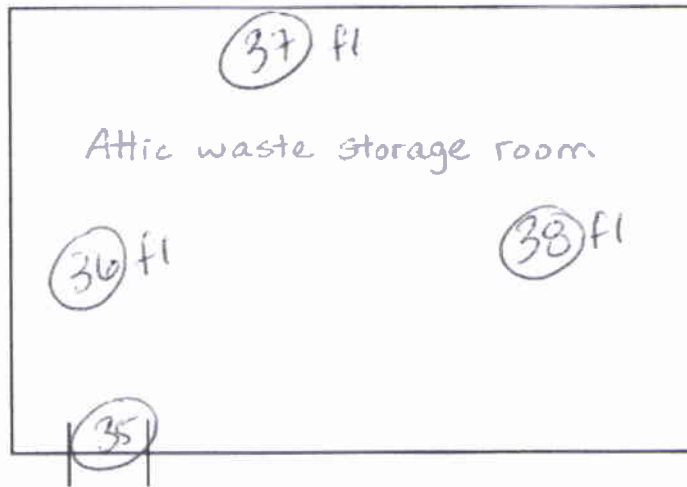
all areas < 0.03 mR/hr



Circled numbers refer to wipe sample numbers.

Attic Storage - Reid
Hospital

all areas < 0.03 mR/hr

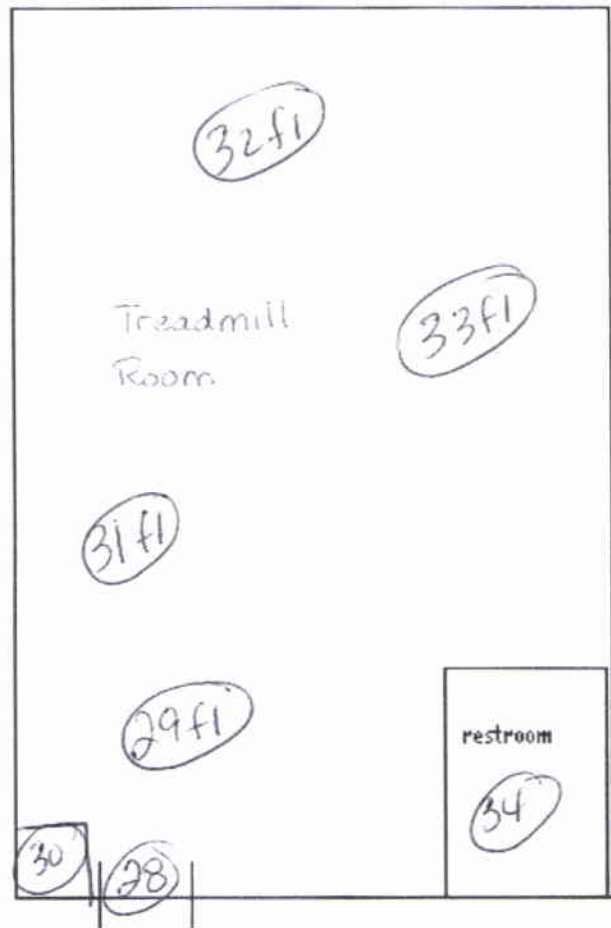


Treadmill Room - Reid Hospital

all areas < 0.03 mR/hr

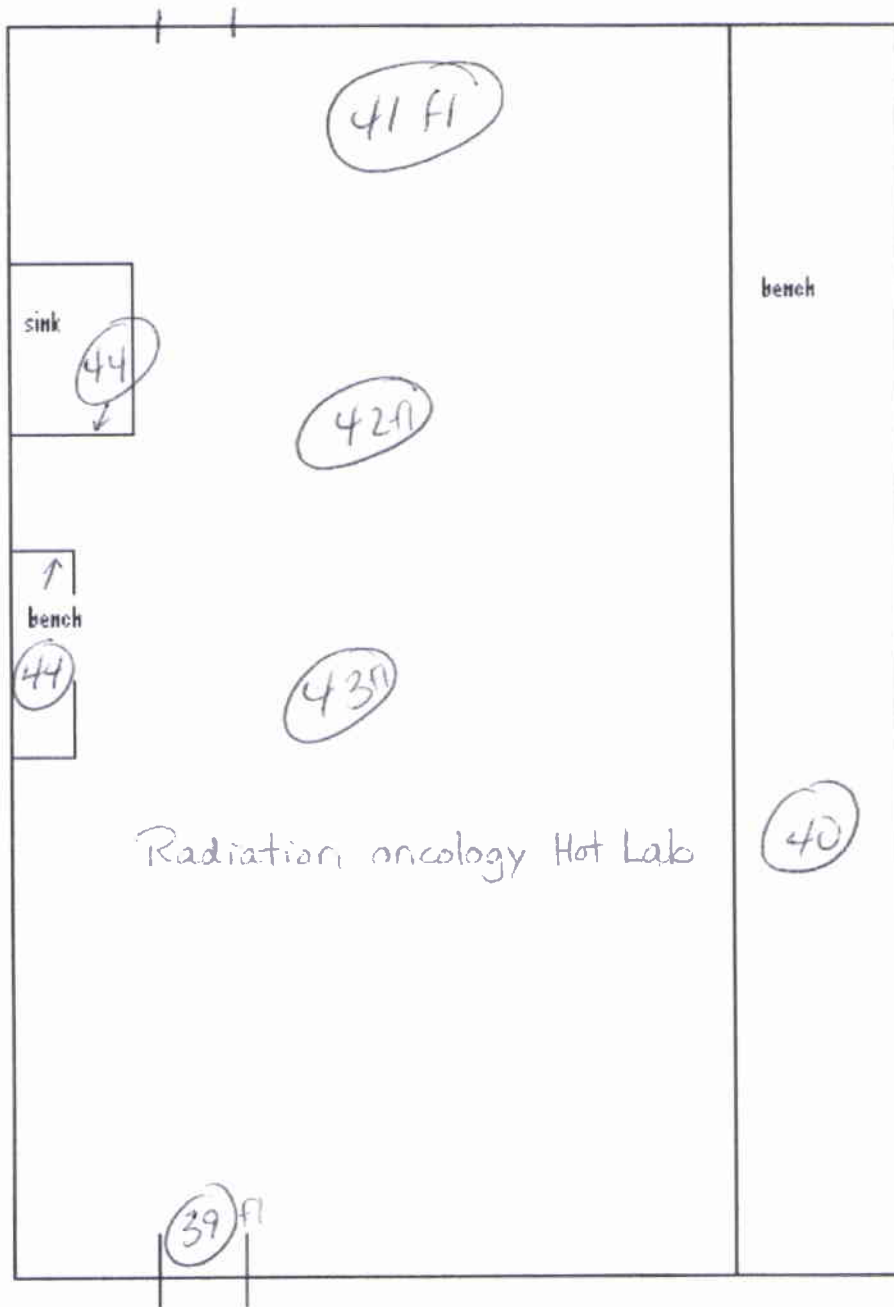
Circled numbers refer
to wipe sample numbers

"fl" means the wipe sample
was taken of the floor



Therapy Hot Lab - Reid Hospital

all areas < 0.03 mR/hr



Circled numbers refer to wipe sample numbers.
"fl" means the wipe sample was taken on the floor.

Sealed Source Leak Test

Licensee: Reid Hospital & Health Care Service

Date: 06/27/08

Performed by:

Patrick Byrne

Nuclide	Type	Calibration Activity	Calibration Date	Location	M/N	S/N
Co-57	Vial	5.848 mCi	03/01/99	Hot Lab	IPL	584-91-4
Current Activity: 0.001 mCi						
Cs-137	Vial	210 uCi	05/29/75	Hot Lab	NES-356	208-48-18
Current Activity: 97.749 uCi						
Ba-133	Vial	239.5 uCi	04/01/08	OCC HL	IPL	1288-26-5
Current Activity: 235.85 uCi						
Ba-133	Vial	281.7 uCi	11/01/04	Hot Lab	IPL	1074-42-7
Current Activity: 222.52 uCi						
Co-57	Flood	10 mCi	03/01/07	Hot Lab	NES8400	1229-065
Current Activity: 2.899 mCi						
Cs-137	Vial	204.3 uCi	04/01/07	OCC HL	RV-137-200U	1218-48-13
Current Activity: 198.53 uCi						
Co-57	Flood	10 mCi	03/16/07	OCC HL	MED3709	104721
Current Activity: 3.013 mCi						

Comment: The sources listed above were leak tested using a dry wipe technique and were found to have less than 0.005 uCi removable activity. The following Minimum Detectable Activities are based upon a background at the indicated value. Background was at or below these levels when the above tests were completed.

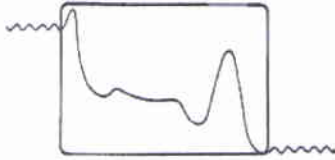
Well Counter: Ludlum 2200 Scaler

Nuclide	MDA	Background
Cs-137	2.1×10^{-4} uCi	45 cpm
Ba-133	6.0×10^{-5} uCi	264 cpm
Co-57	4.0×10^{-5} uCi	307 cpm

RADIATION SAFETY OFFICER:

C.S. Narayanan

7/18/08



Monitoring Services

P.O. BOX 266677 HOUSTON, TEXAS 77207-6677 . AREA CODE 713-478-6820 FAX 281-532-0929

SEALED SOURCE LEAK TEST CERTIFICATE

C. NARAYANAN
REID HOSPITAL
1100 REID PKWY

CUSTOMER #: 2143

RICHMOND

IN
47374

SOURCE #: 25108

ACOUNT #: 1613

RADIONUCLEIDE: CS-137

ACTIVITY: 0 CI

SERIAL NO: BRACHY SOURCES

WIPE DATE 8/1/2008

EFFICENCY: 0.95

GROSS CPM: 18

BKG CPM: 18

NET CPM: 0

NET CPM
EFF X 2.22×10^6 DPM/ μ CI = MICROCURIE

THE ABOVE SOURCE WIPE TEST HAS BEEN ASSAYED IN ACCORDANCE WITH OUR RADIOACTIVE MATERIAL LICENSE AND THE APPROPRIATE REGULATORY REQUIREMENTS. THE REGULATIONS DEFINE A LEAKING SOURCE AS ONE FROM WHICH AN APPROPRIATE WIPE TEST HAS REMOVED 0.005 (5.0×10^{-3}) MICROCURIE OR MORE OF ACTIVITY.

THE REMOVABLE ACTIVITY WAS: $< 1.0 \times 10^{-7}$

MICROCURIE

ASSAY NO.: 8/11/2008 47

DATE: 8/12/2008

ASSAYED BY:

Eugene DiTullio
Director of Radiology Services
Reid Hospital & Health Care Services
1100 Reid Parkway
Richmond, Indiana 47374

CERTIFIED MAIL™



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