

Ball Memorial Hospital

A Clarian Health Partner

July 28, 2010

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

Dear Sir or Madam:

Ball Memorial Hospital would like to amend its Byproduct Materials License Number 13-00951-03, to remove the 1399 North Baldwin Avenue, Marion, IN facility as an area of use. All licensed activities have ceased at that address of use and a close-out survey has been conducted and is enclosed.

If there are any questions concerning this license amendment, please contact me at 765-747-4440.

Sincerely,

Alvis E. Foster, PhD
Radiation Safety Officer

Terry Pence, RPh, MBA
Vice President, Clinical Service Lines

Enclosures: 5

The Cancer Center at BMH

2401 W. University Ave.
Muncie, IN 47303-3499
Office: (765) 751-1449

RECEIVED AUG 03 2010

www.accessbmh.org

Close-out survey of 1399 North Baldwin Street, Marion, Indiana

License # 13-00951-03

Performed by: Alvis E. foster, PhD, RSO

Date Performed: 7/23/2010

Radioactive materials usage at this address of use was limited to diagnostic cardiology medical procedures in humans, along with the use of sealed sources for equipment calibration and quality control.

Wipe tests for removable radioactive contamination were taken on 7/23/10 and analyzed with an Inspector portable G-M wipe test analyzer (S/N: 06606). Wipe samples were placed upon a planchette below the G-M window and counted for 1 minute. The efficiency of this system for Cesium-137 is 27.8 dpm/cpm.

The radiation levels survey was performed on 7/23/10 by A. Foster, using a Bicron Surveyor 2000 Geiger-Muller survey meter (S/N: C051E) with a "pancake" probe. The meter was calibrated on 7/7/10. The range used for the radiation level survey was 0.0 to 0.2 mR/hr.

Visual Inspection

The area was visually inspected to ensure that all radioactive waste had been removed. No radioactive material was located in the area.

Radiation Level Survey

No area demonstrated radiation levels in excess of the background reading of 0.01 mR/hr.

Sealed Sources

All sealed sources have been moved to the 2401 W. University Ave., Muncie, Indiana address of use. No sealed source had ever been found to be leaking. Enclosed is a copy of the results of the last leak tests performed on the sealed sources prior to the move.

Area Survey Results

Area surveys were conducted with a Bicron Surveyor 2000 survey meter (S/N: C051E) using a G-M (PGM) "pancake probe (S/N C933D) calibrated 7/7/10

Scale used: 0.0 – 0.2 mR/hr

Background measurement: 0.01 mR/hr

Performed by: A.E. Foster

*Map Number	*Location	Measurement mR/hr
1	Hot Lab South counter	0.01
2	Hot Lab West Counter	0.01
3	Hot Lab Floor	0.01
4	Hot Lab Waste Cans	0.01
5	Hot Lab Cabinets	0.01
6	Treadmill	0.01
7	Floor Around Treadmill	0.01
8	Gamma Camera	0.01
9	Floor Around Camera	0.01
10	Patient Restroom	0.01
11	Sink & Counter	0.01
12	Exam Room	0.01
13	Non-Radioactive Trash	0.01

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

Conclusion

As of 7/23/10, all radioactive materials have been removed from the area of use and all areas are at background level.

Removable Contamination Survey Results

Wipe samples were counted in an Inspector Portable G-M Wipe Test Instrument (S/N: 06606). The efficiency of this system for Cesium-137 is 27.8 dpm/cpm.

Background: 37 counts per minute

Wipe *Number	*Location	Gross counts per minute	Net counts per minute	Disintegrations per minute
1	Hot Lab South counter	37	0	0
2	Hot Lab West Counter	42	5	139
3	Hot Lab Floor	34	0	0
4	Hot Lab Waste Cans	33	0	0
5	Hot Lab Cabinets	31	0	0
6	Treadmill	41	4	111.2
7	Floor Around Treadmill	29	0	0
8	Gamma Camera	28	0	0
9	Floor Around Camera	29	0	0
10	Patient Restroom	35	0	0
11	Sink & Counter	35	0	0
12	Exam Room	28	0	0
13	Non-Radioactive Trash	35	0	0

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

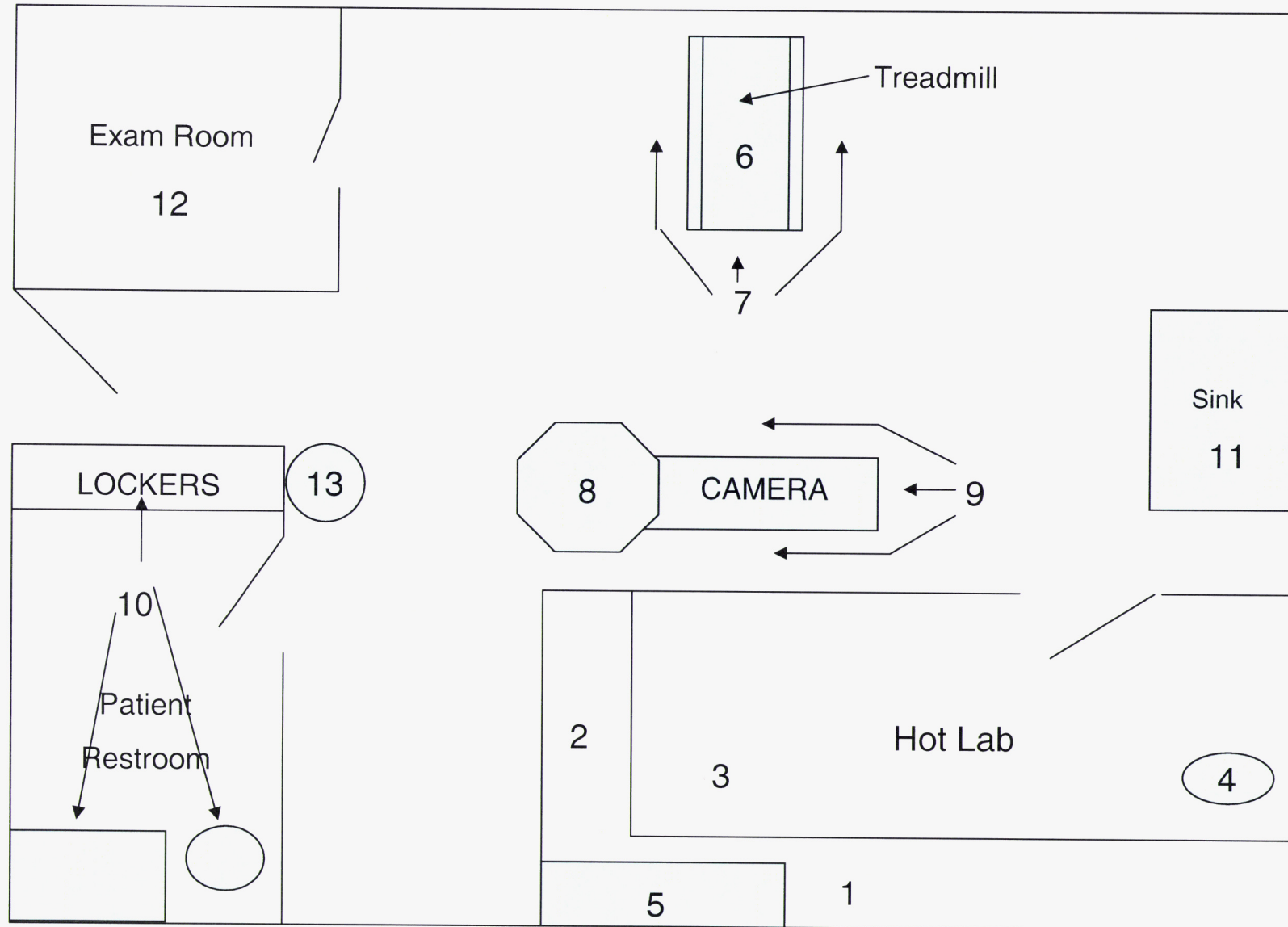
Maximum removable contamination occurred in area 2. Gross count rate = 42 cpm/100cm². Net count rate (gross minus background) = 42 – 37 = 5 cpm/100cm². Net removable disintegrations per minute = 5 cpm/100cm² x 27.8 dpm/cpm = 139.0 dpm/100cm².

Conclusion

As of 7/23/10, all radioactive materials have been removed from the area of use and no removable contamination is present.

Nuclear Cardiology Facility 1399 N. Baldwin St., Marion, Indiana

N ↑





Sealed Source Leak Test

Licensee: Ball Memorial-Medical Consultants, Inc.

Date: 06/01/10

Performed by: Patrick Byrne

Nuclide	Type	Calibration Activity	Calibration Date	Location	M/N	S/N
Cs-137	Vial	220.6 uCi	10/01/99	Hot Lab	RV137200V	644926
Current Activity: 172.4 uCi						
Co-57	Flood	10 mCi	05/01/09	Hot Lab	PF16R-057-10M	1372-125
Current Activity: 3.631 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: _____

Alvis E. Foster, Ph.D.
Ball Memorial Hospital
2401 W. University Ave.
Muncie, IN 47303-3428

PLEASE SHIP TO THE TOP OF ENVELOPE TO THE RIGHT
OF THE RETURN ADDRESS. FOLD AT DOTTED LINE

CERTIFIED MAIL™



7008 0150 0002 8127 0562



X



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