

**Ira M. Garelick, M.S., D.A.B.R.**  
**Medical Health Physicist**  
**6 Village Drive**  
**Livingston, NJ 07039**

June 18, 2008

Patricia Fehring White  
Columbus Hospital  
495 N. 13<sup>th</sup> Street  
Newark, NJ 07107

P-6  
79-07213-03  
03009949

Dear Ms. White:

A site visit was made to Columbus Hospital on June 12, 2008. The purpose of this visit was to perform the closeout survey of the Nuclear Medicine section. The following observations were noted:

1. The closeout survey showed all areas in Nuclear Medicine and Cardiology to be indistinguishable from normal background. The wipe tests showed no removable contamination in any area; the release limit is 200 disintegrations per minute per 100 square centimeters (dpm/sq.cm). Please refer to the attached sheets. Following removal of the remaining container and sealed sources (see below) the area may be released for unrestricted use.
2. A final sealed source inventory and leak test was performed. All sources tested had removable contamination below the allowable level of 0.005 microcuries. The sealed sources remain in the hot lab. Arrangements have been made with Nuclear Diagnostics (Rockaway, NJ) to remove the sealed sources. Please make sure they leave a bill of lading for removal of the sources.
3. There was one sharps container in the Hot Lab with levels above background. The surface reading was approximately 0.2 mR per hour. This must be held for further decay. It then needs to be surveyed to ensure that it is indistinguishable from normal background. The container should then be disposed of properly. This survey needs to be documented.
4. Once the area is ready for unrestricted use, you will need to contact the State Department of Environmental Protection and U.S. Nuclear Regulatory Commission to terminate your radioactive materials license. Contact information is given below. **You need to do this no later than June 30, 2008.**
5. The four survey meters should be donated to St. Michael's Medical Center.

6. The lead items in the department (bricks, shields, etc.) cannot be discarded as normal trash. Please contact your hazardous waste vendor for proper disposal. The containers should be checked that all radiation labels have been removed or defaced.
7. All radiation warning signs posted in the Department need to be removed.

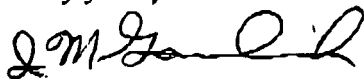
Contact Information

New Jersey Department of Environmental Protection  
Radioactive Materials Section  
P.O. Box 415  
Trenton, NJ 08625  
License number NJSL-70246/01

United States Nuclear Regulatory Commission  
Medical Licensing Section  
475 Allendale Road  
King of Prussia, PA 19406  
License number 29-07213-03

Should you have any questions concerning these items, please do not hesitate to contact me at (973) 322-5256.

Sincerely yours,



Ira M. Garelick, M.S., D.A.B.R.  
Medical Health Physicist

## CLOSEOUT SURVEY - COLUMBUS HOSPITAL

All areas in the Hot Lab, Patient Injection Area, Camera Rooms, and Treadmill Room were surveyed with a Ludlum Model 14C survey meter, serial number 213138. This meter has a model 44-9 "pancake" type probe, and was calibrated on 5 December 2007. All areas were surveyed and found to be indistinguishable from the normal background rate of approximately 0.03 mR/hr. Please refer to the attached diagrams.

Surfaces were then wipe tested with moist cottons swabs and counted on an Atomlab Model 950 well counter. Results were:

<u>Area</u>	<u>Background</u>	<u>Net dpm</u>
A & B	351	0
C	351	0
D & E	351	0
F & G	351	0
H & I	351	0
J	351	0
K	351	0
Stress Area	351	0
Seed Storage Room	351	0

All are below the release limit of 200 dpm/100 square centimeters.

The instruments used are property of Columbus Hospital.

Conclusion: No residual contamination. Following removal of sealed sources and decayed sharps container, all areas may be released for unrestricted use.

  
Ira M. Garelick, M.S., D.A.B.R.

COLUMBUS HOSPITAL  
NUCLEAR MEDICINE DEPARTMENT

Daily Survey & Wipe Tests  
See Diagram for Keyed Areas

Date: 6/12/08 Instrument: Ludlum 14C / A team back  
Technologist: Duc

I Area Survey (MR./Hr.)

A) <u>0.03</u>	H) <u>0.03</u>
B) <u>0.03</u>	I) <u>0.03</u>
C) <u>0.03</u>	J) <u>0.03</u>
D) <u>0.03</u>	K) <u>0.03</u>
E) <u>0.03</u>	L) <u>NA</u>
F) <u>0.03</u>	M) <u>NA</u>
G) <u>0.03</u>	N) Stress: <u>0.03</u>

II Wipe Tests

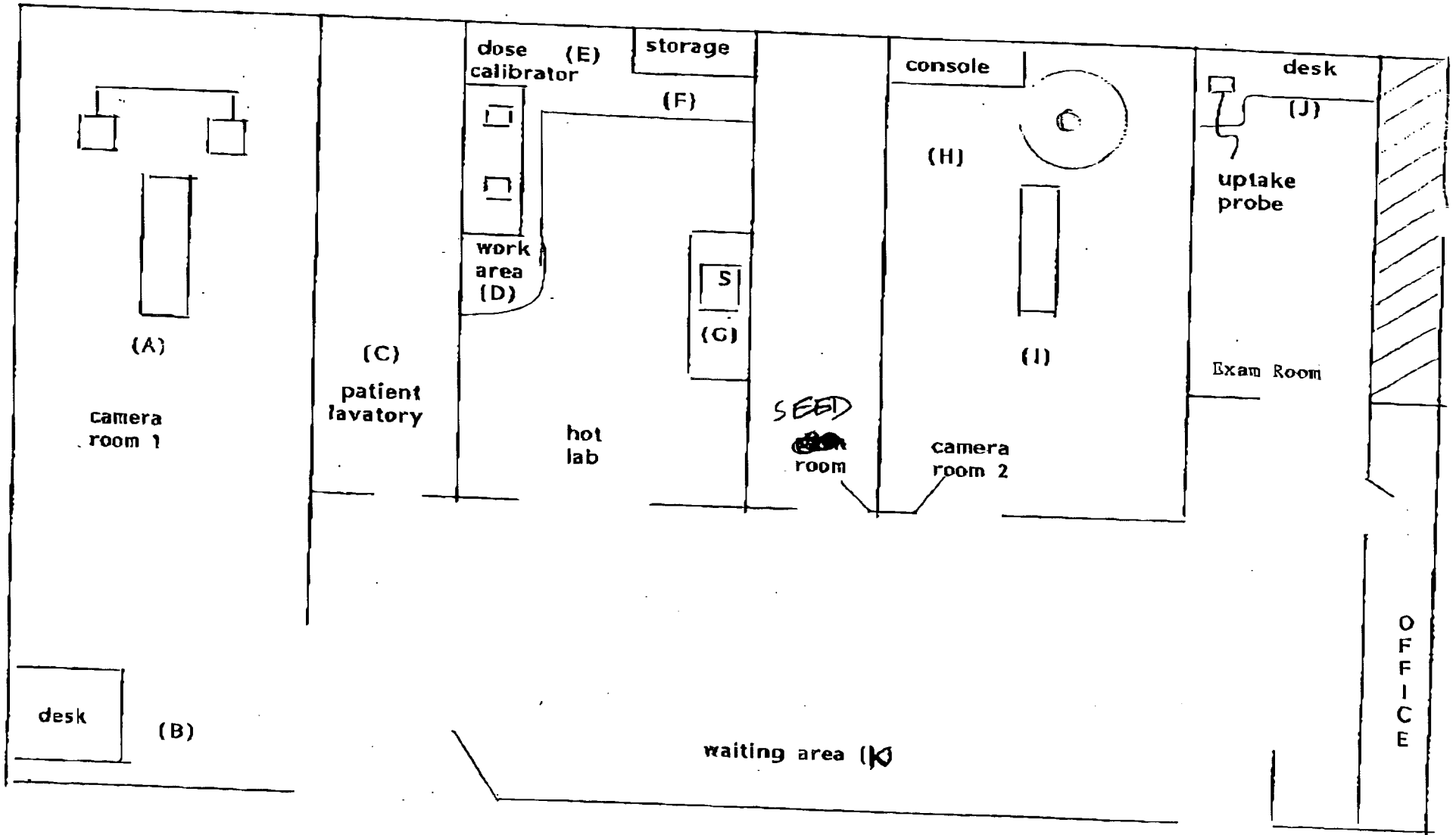
	BKG	NET DPM
A-C:	<u>359</u>	<u>∅</u>
D-G:	<u>359</u>	<u>∅</u>
H-J:	<u>359</u>	<u>∅</u>
L-N:	<u>359</u>	<u>∅</u>

Trigger Levels

Restrict area: 5.0 mr/hr  
Unrestricted area: 0.5 mr/hr  
Wipe Tests: 2000 dpm

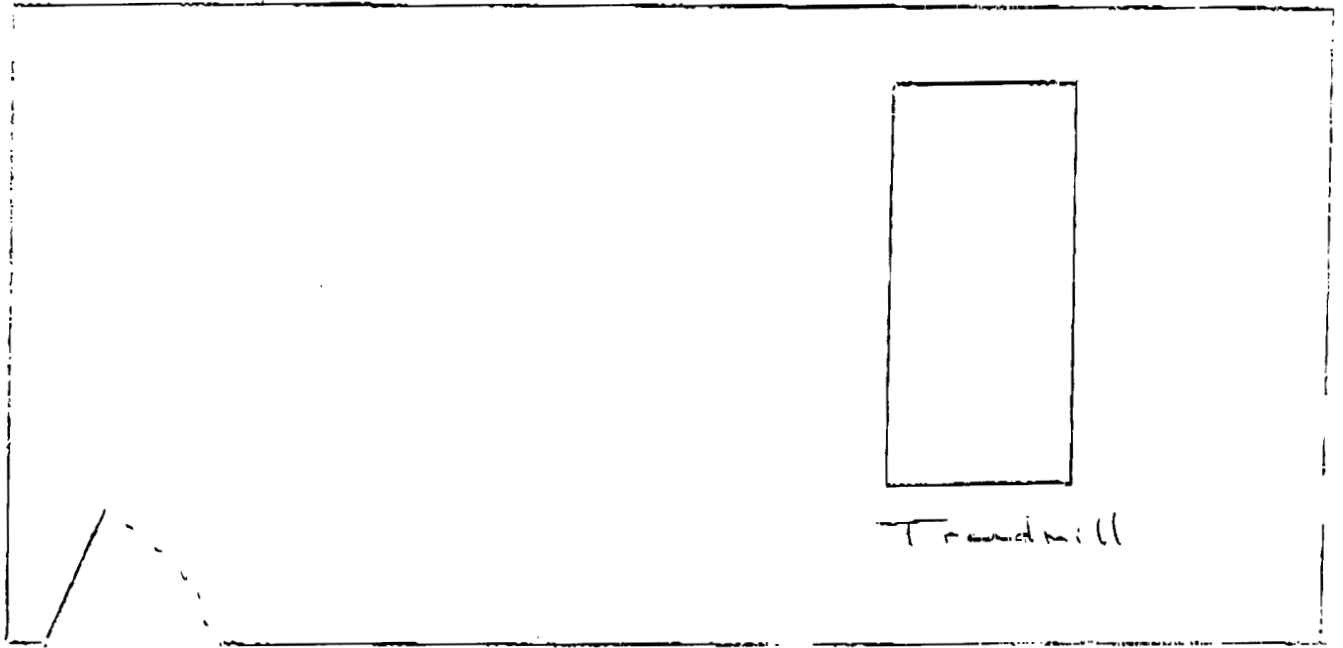
See separate  
close-out report  
*Duc*

COLUMBUS HOSPITAL  
NUCLEAR MEDICINE DEPARTMENT



# Cardiology Area (N)

(Stress Testing)



COPY

**COLUMBUS HOSPITAL  
NUCLEAR MEDICINE SEALED SOURCE INVENTORY  
ALL ARE STORED IN THE NUCLEAR PHARMACY (HOT LAB)**

<u>Source</u>	<u>Activity/Date</u>	<u>Mfg/Serial #</u>	<u>Present</u>
1. Co-57 Flood	19.7 mCi, 10/16/07	QSA Global, 12348C	
2. Co-57 Vial	5.3 mCi, 11/86	Synco 212002	
3. Co-57 Vial	6.7 mCi, 8/85	Amersham 6697MA	
4. Co-57 Vial	6.6 mCi, 10/83	Amersham 4871 MA	
5. Co-57 Vial	5.0 mCi, 9/88	Dupont S206029-61	
6. Ra-133 Vial	257 uCi, 8/83	Amersham 2209MA	
7. Cs-137 Vial	205 uCi, 10/82	Dupont 0982A04	
8. Cs-137 Rod	7 mCi, 5/82	Dupont 137T	
9. Co-57 Rod	0.10 uCi, 3/83	Amersham 5171MR	
10. Co-57 Printer	84 uCi, 1/90	Amersham BY 426	
11. Cs-137 Disc	5 uCi (x2)	Eberline CS-7A	
12. Co-57 Vial	5.07 mCi, 3/06	BM0657-03721	
13. Co-57 Vial	5.25 mCi, 6/90	Capintec S8221005-02	
14. Co-57 Marker	100 uCi, 12/04	BM 03100-1410	
15. Cs-137 Rod	94 mCi, 5/02	IPL 851324	
16. Co-57 Marker	100 uCi, 9/07	RadQual BM0357L1003111	
17. Co-57 Vial	5.73 mCi, 12/07	RadQual BM06E57-5919	

Date:

6/12/08

Performed by:



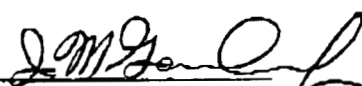
### NUCLEAR MEDICINE SEALED SOURCE LEAK TEST


The sealed sources on the attached list were leak-tested with cotton alcohol wipes or moist cotton swabs. These were then counted on an Atomlab Model 950 Multi-Channel Analyzer at St. Barnabas Medical Center (Livingston, NJ) for one minute at the appropriate window setting. Results were as follows:

- |      |                            |                             |
|------|----------------------------|-----------------------------|
| I.   | Cesium-137                 | Standard = <u>0.037</u> uCi |
|      | Standard counts =          | <u>9486</u>                 |
|      | Wipe test counts =         | <u>14</u>                   |
|      | Background =               | <u>14</u>                   |
|      | 0.005 uCi =                | <u>1280</u>                 |
| II.  | Cobalt- 57                 | Standard = <u>0.424</u> uCi |
|      | Standard counts =          | <u>725,416</u>              |
|      | Wipe test counts =         | <u>19</u>                   |
|      | Background =               | <u>19</u>                   |
|      | 0.005 uCi =                | <u>8554</u>                 |
| III. | Other ( <sup>133</sup> Ba) | Standard = <u>0.020</u> uCi |
|      | Standard counts =          | <u>10,457</u>               |
|      | Wipe test counts =         | <u>32</u>                   |
|      | Background =               | <u>27</u>                   |
|      | 0.005 uCi =                | <u>2607</u>                 |

**Test results revealed the presence of less than 0.005 uCi removable contamination.**

6/13/08  
Date

  
 Performed By

  
 Radiation Safety Officer



# N NUCLEAR DIAGNOSTIC PRODUCTS

101 Roundhill Drive  
Rockaway, NJ 07866  
Ph. 973-664-9696  
Fax. 973-664-9699

June 24, 2008

Columbus Hospital  
Attention: Nuclear Medicine; Rita Lapchak  
495 North 13<sup>th</sup> Street  
Newark, NJ 07107

Dear Rita,

This letter is to acknowledge the pick up and disposal on June 24, 2008 and now in the hands of Nuclear Diagnostic Products, Inc at 101 Round Hill Drive, Rockaway, NJ 07866. Attach is the exact inventory except for line item #18 - I-129 Disc. We decided to leave this behind because of the possible limit at NDP. We will look to evaluate the correct disposal for the I-129.

ITEM DESCRIPTION	QUANTITY
CS-137 rod source	2
CO-57 e-vial	6
CO-57 spot marker	3
CO-57 rod source	1
CO-57 flood source	2
BA-133 e-vial	1
CS-137 check source	5
CS-137 e-vial	1

If you have any question or need additional information, please call me at the phone number above.

Thank you.

Regards,

  
Wayne Wong, Rph, BCNP