

April 7, 2010

Nuclear Regulatory Commission, Region III  
 Medical Licensing Division  
 2443 Warrenville Road  
 Lisle, IL 60532-4351

To Whom It May Concern:

The following is a re-submission of the requested materials for Radioactive Materials License #24-32245-01 (Kansas City Cardiology Associates, 3200 NE Ralph Powell Road; Lee's Summit, MO 64064) in regards to **Control Number: 318779.**

We have made the requested changes to our decommissioning report. We trust that you will now find everything satisfactory.

If you should have any questions or need additional information, please contact our health physicist, Marcia West, at 816-807-8090. Your attention to this matter is greatly appreciated.

Sincerely,

Dr. James Sear  
 Radiation Safety Officer

3200 N.E. Ralph Powell Road • Lee's Summit, Missouri 64064 • 816-525-1600 • 1-800-559-2059  
 Research Medical Office Tower, Suite T-509 • 6420 Prospect Avenue • Kansas City, Missouri 64132 • 816-523-4525 • 1-800-559-2059

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January 5, 2010

Nuclear Regulatory Commission  
Medical Licensing Division, Region III  
2443 Warrenville Road  
Lisle, IL 60532-4351

Dear Madam/Sir,

Please amend our Radioactive Materials License #24-32245-01 (Kansas City Cardiology Associates, Inc. 600 N.W. Murray, Ste 108; Lee's Summit, MO) to include the following change:


We have closed our prospect location at 6420 Prospect Avenue, Ste. T-509; Kansas City, MO 64132. The enclosed paperwork is all of the documents regarding the decommissioning that was performed.

As you can see from the overall map, the North and East walls are outside walls. The West wall was against another office area. The South wall was along a hallway for the patients to traverse through the office.

All of the sources were transferred to our Lee's Summit location to be used by that location or to be stored until another office can be opened up. A radionuclide history as well as maps and test results have all been included for your review. At this time, we ask that you please remove the prospect location from our license and release the area into public use.

Your attention in this matter is greatly appreciated. Should you have any additional questions, please contact me, Marcia West, at 816-807-8090 or by fax at 816-974-1443.

Sincerely,



Marcia R. West  
Regional Health Physicist

### **History of Radionuclides and Instruments**

Kansas City Cardiology Associates  
6420 Prospect Ave., Ste. T-509  
Kansas City, MO 64132

The only radionuclide used in any of the areas decommissioned was Technetium 99m. No other radionuclides were ever used.

All sealed sources were transferred to the Lee's Summit location for use/or storage until another facility is opened.

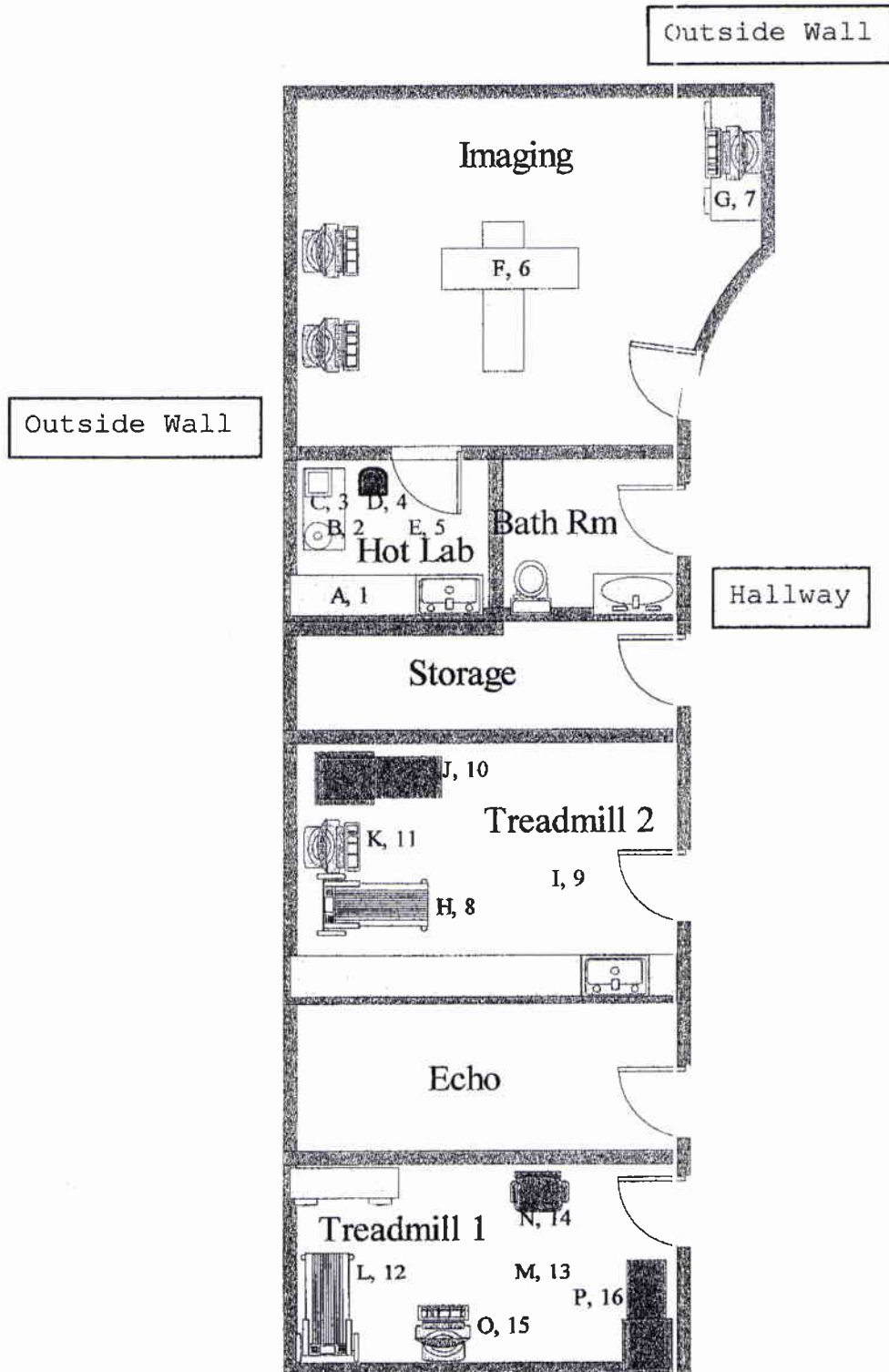
All of the paperwork regarding the transfer is on file and up to date.

The survey meter, dose calibrator, well counter, and other equipment were also moved to the Lee's Summit location and placed into storage.

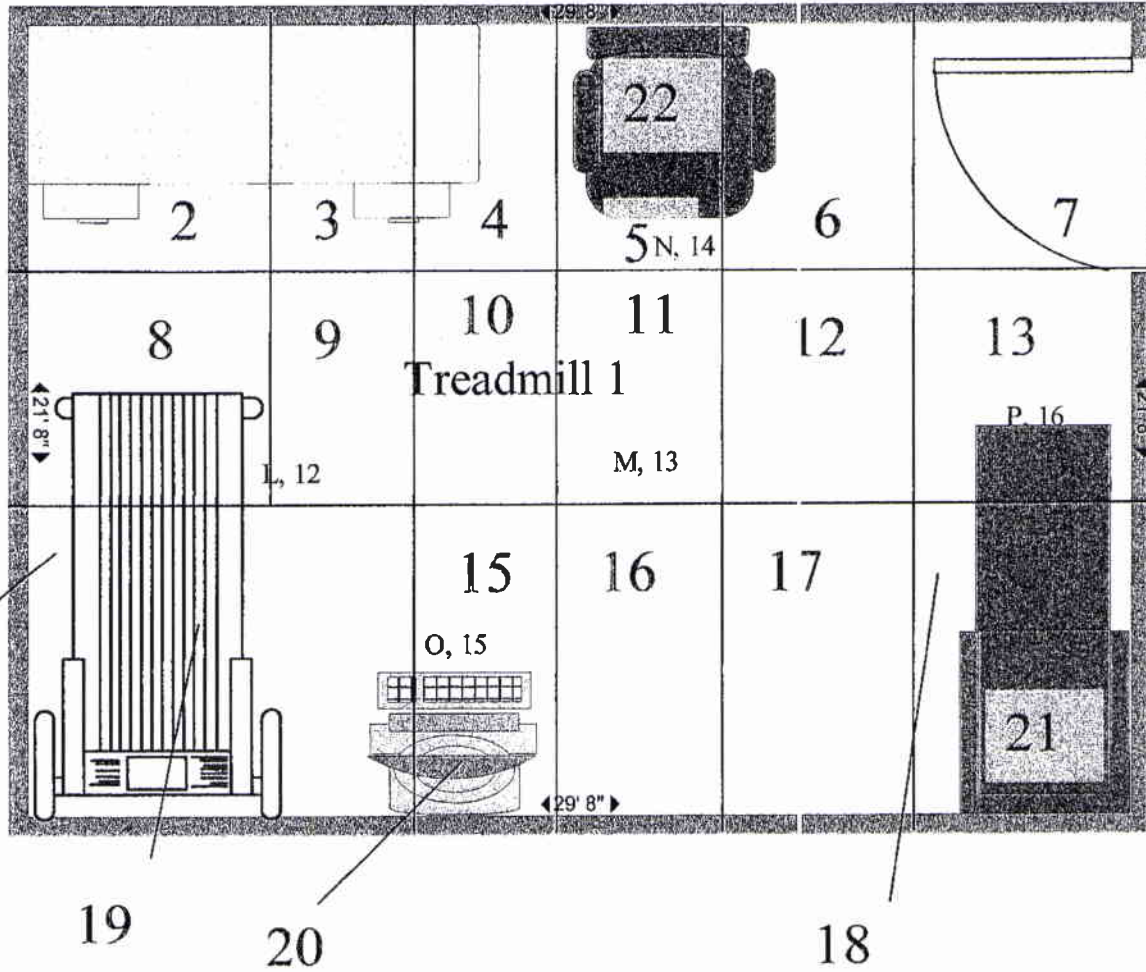
Kansas City Cardiology Associates- Prospect Location  
6420 Prospect Avenue, Ste. T-509  
Kansas City, MO 64132  
12-14-2009

Overall View of Area Decommissioned

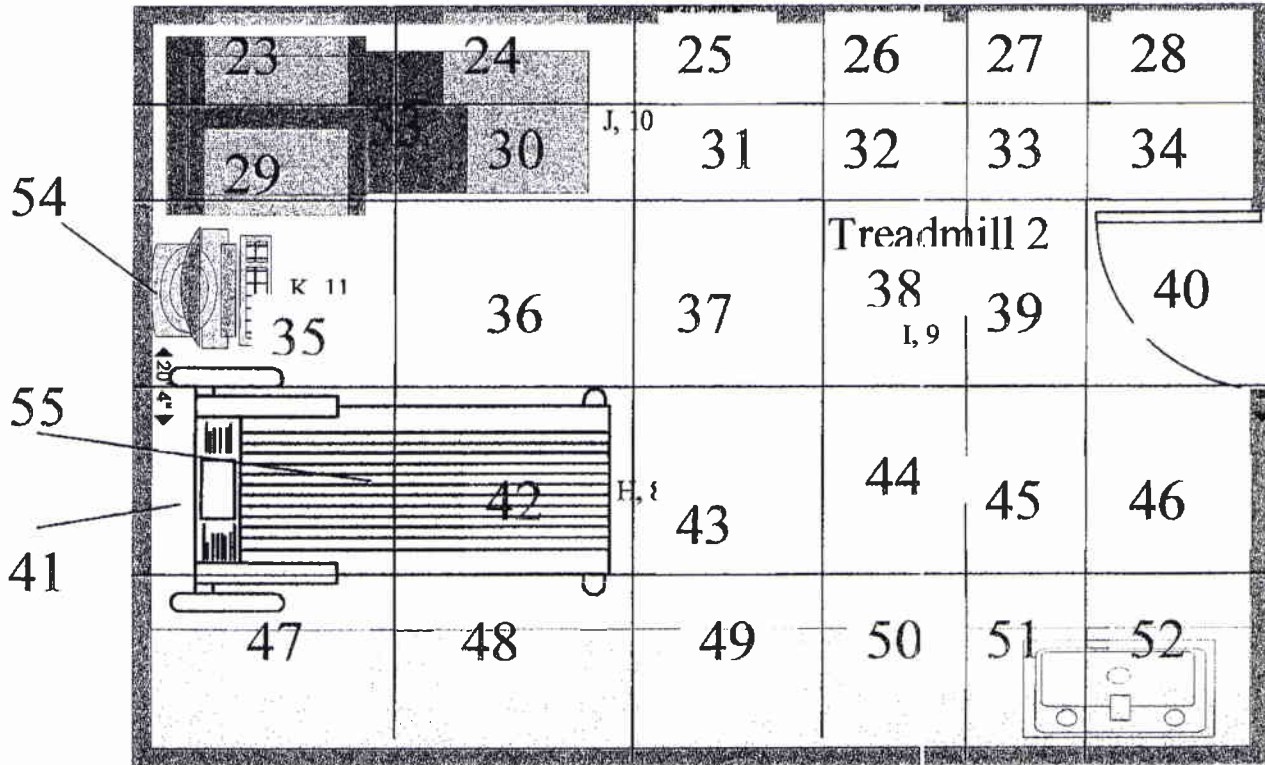
North



### Kansas City Cardiology – Prospect Decommissioning Wipes 12-14-09



### Kansas City Cardiology – Prospect Decommissioning Wipes 12-14-09



**CLOSE-OUT AREA SURVEYS****DATE:** 14-Dec-09**LICENSEE:** Kansas City Cardiology - Prospect; Kansas City, MO**INSTRUMENT:** Ludlum Model 19 R meter (SN: 169637)**CAL. DATE:** 4/27/2009**LOCATION:** Treadmill Rm's 1 and 2**ACTION LEVEL:** 10  $\mu$ R

<u>Location</u>	<u>Results</u>	<u>Location</u>	<u>Results</u>
1 Background	3-5 $\mu$ R	35 Floor - Treadmill Rm 2	3-5 $\mu$ R
2 Floor - Treadmill Rm 1	3-5 $\mu$ R	36 Floor - Treadmill Rm 2	3-5 $\mu$ R
3 Floor - Treadmill Rm 1	3-5 $\mu$ R	37 Floor - Treadmill Rm 2	3-5 $\mu$ R
4 Floor - Treadmill Rm 1	3-5 $\mu$ R	38 Floor - Treadmill Rm 2	3-5 $\mu$ R
5 Floor - Treadmill Rm 1	3-5 $\mu$ R	39 Floor - Treadmill Rm 2	3-5 $\mu$ R
6 Floor - Treadmill Rm 1	3-5 $\mu$ R	40 Floor - Treadmill Rm 2	3-5 $\mu$ R
7 Floor - Treadmill Rm 1	3-5 $\mu$ R	41 Floor - Treadmill Rm 2	3-5 $\mu$ R
8 Floor - Treadmill Rm 1	3-5 $\mu$ R	42 Floor - Treadmill Rm 2	3-5 $\mu$ R
9 Floor - Treadmill Rm 1	3-5 $\mu$ R	43 Floor - Treadmill Rm 2	3-5 $\mu$ R
10 Floor - Treadmill Rm 1	3-5 $\mu$ R	44 Floor - Treadmill Rm 2	3-5 $\mu$ R
11 Floor - Treadmill Rm 1	3-5 $\mu$ R	45 Floor - Treadmill Rm 2	3-5 $\mu$ R
12 Floor - Treadmill Rm 1	3-5 $\mu$ R	46 Floor - Treadmill Rm 2	3-5 $\mu$ R
13 Floor - Treadmill Rm 1	3-5 $\mu$ R	47 Floor - Treadmill Rm 2	3-5 $\mu$ R
14 Floor - Treadmill Rm 1	3-5 $\mu$ R	48 Floor - Treadmill Rm 2	3-5 $\mu$ R
15 Floor - Treadmill Rm 1	3-5 $\mu$ R	49 Floor - Treadmill Rm 2	3-5 $\mu$ R
16 Floor - Treadmill Rm 1	3-5 $\mu$ R	50 Floor - Treadmill Rm 2	3-5 $\mu$ R
17 Floor - Treadmill Rm 1	3-5 $\mu$ R	51 Floor - Treadmill Rm 2	3-5 $\mu$ R
18 Floor - Treadmill Rm 1	3-5 $\mu$ R	52 Floor - Treadmill Rm 2	3-5 $\mu$ R
19 Treadmill - Treadmill Rm 1	3-5 $\mu$ R	53 Bed - Treadmill Rm 2	3-5 $\mu$ R
20 EKG - Treadmill Rm 1	3-5 $\mu$ R	54 EKG - Treadmill Rm 2	3-5 $\mu$ R
21 Bed - Treadmill Rm 1	3-5 $\mu$ R	55 Treadmill - Treadmill Rm 2	3-5 $\mu$ R
22 Injection Chair - Treadmill Rm 1	3-5 $\mu$ R		
23 Floor - Treadmill Rm 2	3-5 $\mu$ R		
24 Floor - Treadmill Rm 2	3-5 $\mu$ R		
25 Floor - Treadmill Rm 2	3-5 $\mu$ R		
26 Floor - Treadmill Rm 2	3-5 $\mu$ R		
27 Floor - Treadmill Rm 2	3-5 $\mu$ R		
28 Floor - Treadmill Rm 2	3-5 $\mu$ R		
29 Floor - Treadmill Rm 2	3-5 $\mu$ R		
30 Floor - Treadmill Rm 2	3-5 $\mu$ R		
31 Floor - Treadmill Rm 2	3-5 $\mu$ R		
32 Floor - Treadmill Rm 2	3-5 $\mu$ R		
33 Floor - Treadmill Rm 2	3-5 $\mu$ R		
34 Floor - Treadmill Rm 2	3-5 $\mu$ R		

**REMARKS:** The above area surveys were acquired of the assigned areas with a micro R meter. All readings fell within the room background reading of 3-5  $\mu$ R/hr.

**PERFORMED BY:** \_\_\_\_\_

For: Cardinal Health 414, Inc. Medical & Health Physics  
Nebraska Registry #50



**CLOSE-OUT WIPE TEST****DATE:** 14-Dec-09**LICENSEE:** Kansas City Cardiology - Prospect; Kansas City, MO**INSTRUMENT:** Cobra II Auto Gamma MCA**CAL DATE:** 10/29/2009**LOCATION:** Treadmill Rms 1 and 2**ACTION LEVEL:** 200 dpm/100 cm2

<u>Location</u>	<u>Results</u>	<u>Location</u>	<u>Results</u>
1 Background	0 CPM (110-170 KEV)	35 Floor - Treadmill Rm 2	<200 dpm/100 cm2
2 Floor - Treadmill Rm 1	<200 dpm/100 cm2	36 Floor - Treadmill Rm 2	<200 dpm/100 cm2
3 Floor - Treadmill Rm 1	<200 dpm/100 cm2	37 Floor - Treadmill Rm 2	<200 dpm/100 cm2
4 Floor - Treadmill Rm 1	<200 dpm/100 cm2	38 Floor - Treadmill Rm 2	<200 dpm/100 cm2
5 Floor - Treadmill Rm 1	<200 dpm/100 cm2	39 Floor - Treadmill Rm 2	<200 dpm/100 cm2
6 Floor - Treadmill Rm 1	<200 dpm/100 cm2	40 Floor - Treadmill Rm 2	<200 dpm/100 cm2
7 Floor - Treadmill Rm 1	<200 dpm/100 cm2	41 Floor - Treadmill Rm 2	<200 dpm/100 cm2
8 Floor - Treadmill Rm 1	<200 dpm/100 cm2	42 Floor - Treadmill Rm 2	<200 dpm/100 cm2
9 Floor - Treadmill Rm 1	<200 dpm/100 cm2	43 Floor - Treadmill Rm 2	<200 dpm/100 cm2
10 Floor - Treadmill Rm 1	<200 dpm/100 cm2	44 Floor - Treadmill Rm 2	<200 dpm/100 cm2
11 Floor - Treadmill Rm 1	<200 dpm/100 cm2	45 Floor - Treadmill Rm 2	<200 dpm/100 cm2
12 Floor - Treadmill Rm 1	<200 dpm/100 cm2	46 Floor - Treadmill Rm 2	<200 dpm/100 cm2
13 Floor - Treadmill Rm 1	<200 dpm/100 cm2	47 Floor - Treadmill Rm 2	<200 dpm/100 cm2
14 Floor - Treadmill Rm 1	<200 dpm/100 cm2	48 Floor - Treadmill Rm 2	<200 dpm/100 cm2
15 Floor - Treadmill Rm 1	<200 dpm/100 cm2	49 Floor - Treadmill Rm 2	<200 dpm/100 cm2
16 Floor - Treadmill Rm 1	<200 dpm/100 cm2	50 Floor - Treadmill Rm 2	<200 dpm/100 cm2
17 Floor - Treadmill Rm 1	<200 dpm/100 cm2	51 Floor - Treadmill Rm 2	<200 dpm/100 cm2
18 Floor - Treadmill Rm 1	<200 dpm/100 cm2	52 Floor - Treadmill Rm 2	<200 dpm/100 cm2
19 Treadmill - Treadmill Rm 1	<200 dpm/100 cm2	53 Bed - Treadmill Rm 2	<200 dpm/100 cm2
20 EKG - Treadmill Rm 1	<200 dpm/100 cm2	54 EKG - Treadmill Rm 2	<200 dpm/100 cm2
21 Bed - Treadmill Rm 1	<200 dpm/100 cm2	55 Treadmill - Treadmill Rm 2	<200 dpm/100 cm2
22 Injection Chair - Treadmill Rm 1	<200 dpm/100 cm2		
23 Floor - Treadmill Rm 2	<200 dpm/100 cm2		
24 Floor - Treadmill Rm 2	<200 dpm/100 cm2		
25 Floor - Treadmill Rm 2	<200 dpm/100 cm2		
26 Floor - Treadmill Rm 2	<200 dpm/100 cm2		
27 Floor - Treadmill Rm 2	<200 dpm/100 cm2		
28 Floor - Treadmill Rm 2	<200 dpm/100 cm2		
29 Floor - Treadmill Rm 2	<200 dpm/100 cm2		
30 Floor - Treadmill Rm 2	<200 dpm/100 cm2		
31 Floor - Treadmill Rm 2	<200 dpm/100 cm2		
32 Floor - Treadmill Rm 2	<200 dpm/100 cm2		
33 Floor - Treadmill Rm 2	<200 dpm/100 cm2		
34 Floor - Treadmill Rm 2	<200 dpm/100 cm2		

**REMARKS:**

The above close-out wipe tests were acquired of the assigned areas. The sample areas consisted of a contiguous wipe from a 3.0' X 3.0' area or approximately 8,400 cm2

**PERFORMED BY:**

For: Cardinal Health 414, Inc. Medical & Health Physics  
Nebraska Registry #50



16 Dec 2009 16:46

Cardinal Medical & Health Physics

Page #1

Protocol #: B

DECOMMISSIONING WIPE

User : MDF

Tech ID: MDP  
 KANSAS CITY CARDIO (PROSPECT) TM ROOM 1/TM ROOM 2  
 Count Time(minutes): 1.00  
 Assay Type: CPM  
 Background Subtract : IPA Bkg  
 Outlier: 5.0 FLAE  
 Dilution Operator : \*  
 %Spillup: 0.00  
 %Spilldown: 0.00  
 Screening: OFF

	Window A	Window B	Window C
Nuclide:	Co-57 75 - 165 keV	MAN 362 - 762 keV	MAN 15 - 2000 keV
Bkg:	42.9	35.8	309
Sigma:	0.00	0.00	1.00
LCR:	0	0	0
Half Life(hours):	0.00	0.00	
Multiplier:	2.0000		
%CV Flag Limit:	0.00	0.00	

S#	TIME	A:CPM	B:CPM	C:CPM	CCPM	F0T/ID
1	1.00	1	3	38	2	TREADMILL ROOM 1 FLOOR
2	1.00	10	3	36	20	TREADMILL ROOM 1 FLOOR
3	1.00	0	0	9	0	TREADMILL ROOM 1 FLOOR
4	1.00	0	0	0	0	TREADMILL ROOM 1 FLOOR
5	1.00	4	6	0	8	TREADMILL ROOM 1 FLOOR
6	1.00	12	5	18	24	TREADMILL ROOM 1 FLOOR
7	1.00	0	0	0	0	TREADMILL ROOM 1 FLOOR
8	1.00	4	0	0	3	TREADMILL ROOM 1 FLOOR
9	1.00	0	5	0	0	TREADMILL ROOM 1 FLOOR
10	1.00	1	1	0	2	TREADMILL ROOM 1 FLOOR
11	1.00	0	0	0	0	TREADMILL ROOM 1 FLOOR
12	1.00	0	8	8	0	TREADMILL ROOM 1 FLOOR
13	1.00	0	12	20	0	TREADMILL ROOM 1 FLOOR
14	1.00	16	3	2	32	TREADMILL ROOM 1 FLOOR
15	1.00	0	0	0	0	TREADMILL ROOM 1 FLOOR
16	1.00	3	7	26	6	TREADMILL ROOM 1 FLOOR
17	1.00	0	0	0	0	TREADMILL ROOM 1 FLOOR
18	1.00	0	0	0	0	TREADMILL ROOM 1 FLOOR
19	1.00	0	8	0	0	TM ROOM 1 TREADMILL
20	1.00	3	0	11	6	TM ROOM 1 EKG
21	1.00	0	6	0	0	TM ROOM 1 BED
22	1.00	0	0	0	0	TM ROOM 1 INJECTION CHAIR
23	1.00	0	3	0	0	TREADMILL ROOM 2 FLOOR
24	1.00	0	5	11	0	TREADMILL ROOM 2 FLOOR
25	1.00	0	8	12	0	TREADMILL ROOM 2 FLOOR
26	1.00	4	0	0	8	TREADMILL ROOM 2 FLOOR
27	1.00	0	0	18	0	TREADMILL ROOM 2 FLOOR
28	1.00	4	0	0	3	TREADMILL ROOM 2 FLOOR
29	1.00	10	0	24	20	TREADMILL ROOM 2 FLOOR
30	1.00	0	5	0	0	TREADMILL ROOM 2 FLOOR
31	1.00	0	0	0	0	TREADMILL ROOM 2 FLOOR

Protocol #: 8

DECOMMISSIONING WIPE

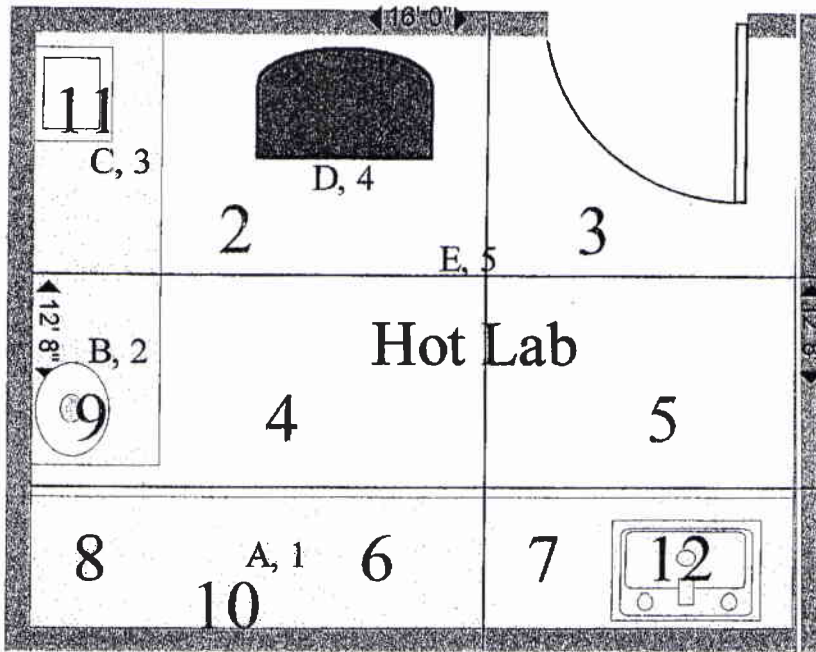
User : MDF

S#	TIME	A:CPM	B:CPM	C:CPM	DCPM	PAT/ID
32	1.00	13	6	50	26	TREADMILL ROOM 2 FLOOR
33	1.00	1	10	3	2	TREADMILL ROOM 2 FLOOR
34	1.00	4	3	0	8	TREADMILL ROOM 2 FLOOR
35	1.00	0	0	4	0	TREADMILL ROOM 2 FLOOR
36	1.00	3	3	0	6	TREADMILL ROOM 2 FLOOR
37	1.00	0	0	0	0	TREADMILL ROOM 2 FLOOR
38	1.00	0	2	14	0	TREADMILL ROOM 2 FLOOR
39	1.00	10	0	30	20	TREADMILL ROOM 2 FLOOR
40	1.00	2	9	1	4	TREADMILL ROOM 2 FLOOR
41	1.00	0	0	0	0	TREADMILL ROOM 2 FLOOR
42	1.00	7	1	12	14	TREADMILL ROOM 2 FLOOR
43	1.00	7	5	0	14	TREADMILL ROOM 2 FLOOR
44	1.00	3	2	15	6	TREADMILL ROOM 2 FLOOR
45	1.00	1	0	31	2	TREADMILL ROOM 2 FLOOR
46	1.00	0	4	0	0	TREADMILL ROOM 2 FLOOR
47	1.00	0	3	0	0	TREADMILL ROOM 2 FLOOR
48	1.00	18	3	36	36	TREADMILL ROOM 2 FLOOR
49	1.00	0	0	0	0	TREADMILL ROOM 2 FLOOR
50	1.00	12	0	1	24	TREADMILL ROOM 2 FLOOR
51	1.00	0	0	0	0	TREADMILL ROOM 2 FLOOR
52	1.00	3	10	38	6	TREADMILL ROOM 2 FLOOR
53	1.00	2	11	28	4	TM ROOM 2 BED
54	1.00	0	0	0	0	TM ROOM 2 EKG
55	1.00	0	0	0	0	TM ROOM 2 TREADMILL

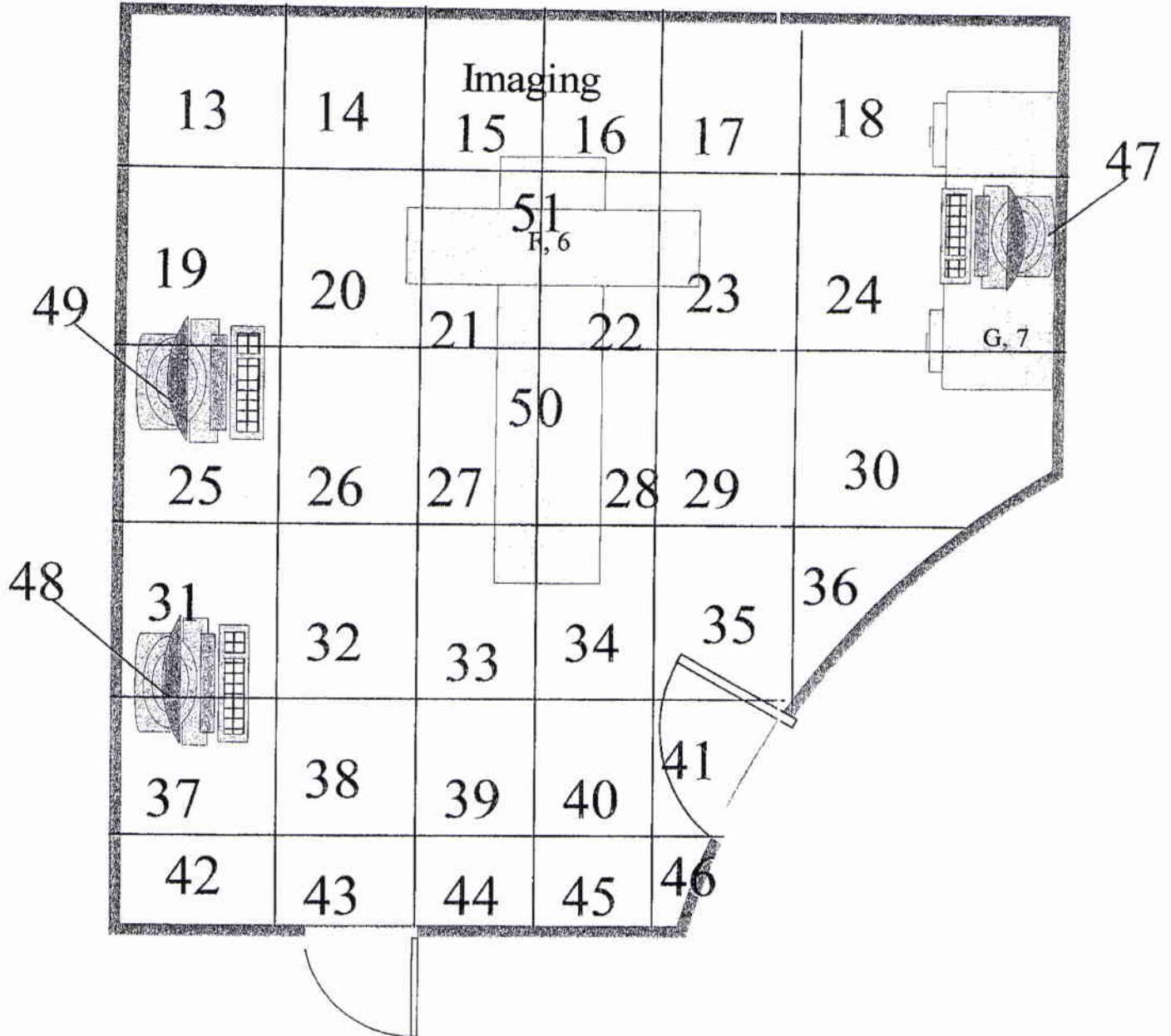
S#	TIME	CPMA	DPM1	MDA at 95% CL:
1	1.00	1		
2	1.00	9	18	7.4 cpm above background.
3	1.00	0	0	
4	1.00	0	0	
5	1.00	3	0	
6	1.00	11	22	
7	1.00	0	0	
8	1.00	3	0	
9	1.00	0	0	
10	1.00	0	0	
11	1.00	0	0	
12	1.00	0	0	
13	1.00	0	0	
14	1.00	15	30	
15	1.00	0	0	
16	1.00	2	0	
17	1.00	0	0	
18	1.00	0	0	
19	1.00	0	0	
20	1.00	2	0	
21	1.00	0	0	
22	1.00	0	0	
23	1.00	0	0	
24	1.00	0	0	
25	1.00	0	0	
26	1.00	3	0	
27	1.00	0	0	
28	1.00	3	0	
29	1.00	9	18	
30	1.00	0	0	
31	1.00	0	0	
32	1.00	12	24	

20	1.00	2	0
21	1.00	0	0
22	1.00	0	0
23	1.00	0	0
24	1.00	0	0
25	1.00	0	0
26	1.00	3	0
27	1.00	0	0
28	1.00	3	0
29	1.00	9	18
30	1.00	0	0
<hr/>			
31	1.00	0	0
32	1.00	12	24
33	1.00	0	0
34	1.00	3	0
35	1.00	0	0
36	1.00	2	0
37	1.00	0	0
38	1.00	0	0
39	1.00	9	18
40	1.00	1	0
41	1.00	0	0
42	1.00	6	0
43	1.00	6	0
44	1.00	2	0
45	1.00	0	0
46	1.00	0	0
47	1.00	0	0
48	1.00	17	34
49	1.00	0	0
50	1.00	11	22
51	1.00	0	0
52	1.00	2	0
53	1.00	1	0
54	1.00	0	0
55	1.00	0	0

Kansas City Cardiology – Prospect  
Decommissioning Wipes 12-14-09



Kansas City Cardiology – Prospect  
Decommissioning Wipes 12-14-09



**CLOSE-OUT AREA SURVEYS**

**DATE:** 14-Dec-09  
**LICENSEE:** Kansas City Cardiology - Prospect; Kansas City, MO  
**INSTRUMENT:** Ludlum Model 19 R meter (SN: 169637) **CAL. DATE:** 4/27/2009  
**LOCATION:** Hot Lab and Imaging **ACTION LEVEL:** 10  $\mu$ R

<u>Location</u>	<u>Results</u>	<u>Location</u>	<u>Results</u>
1 Background	3-5 $\mu$ R	35 Floor - Imaging	3-5 $\mu$ R
2 Floor - Hot Lab	3-5 $\mu$ R	36 Floor - Imaging	3-5 $\mu$ R
3 Floor - Hot Lab	3-5 $\mu$ R	37 Floor - Imaging	3-5 $\mu$ R
4 Floor - Hot Lab	3-5 $\mu$ R	38 Floor - Imaging	3-5 $\mu$ R
5 Floor - Hot Lab	3-5 $\mu$ R	39 Floor - Imaging	3-5 $\mu$ R
6 Floor - Hot Lab	3-5 $\mu$ R	40 Floor - Imaging	3-5 $\mu$ R
7 Floor - Hot Lab	3-5 $\mu$ R	41 Floor - Imaging	3-5 $\mu$ R
8 Well Counter - Hot Lab	3-5 $\mu$ R	42 Floor - Imaging	3-5 $\mu$ R
9 Dose Calibrator - Hot Lab	3-5 $\mu$ R	43 Floor - Imaging	3-5 $\mu$ R
10 Counter - Hot Lab	3-5 $\mu$ R	44 Floor - Imaging	3-5 $\mu$ R
11 Receiving Area - Hot Lab	3-5 $\mu$ R	45 Floor - Imaging	3-5 $\mu$ R
12 Sink - Hot Lab	3-5 $\mu$ R	46 Floor - Imaging	3-5 $\mu$ R
13 Floor - Imaging	3-5 $\mu$ R	47 Processing Comp - Imaging	3-5 $\mu$ R
14 Floor - Imaging	3-5 $\mu$ R	48 Acquisition Comp - Imaging	3-5 $\mu$ R
15 Floor - Imaging	3-5 $\mu$ R	49 Syntac - Imaging	3-5 $\mu$ R
16 Floor - Imaging	3-5 $\mu$ R	50 Camera Bed - Imaging	3-5 $\mu$ R
17 Floor - Imaging	3-5 $\mu$ R	51 Camera Heads - Imaging	3-5 $\mu$ R
18 Floor - Imaging	3-5 $\mu$ R		
19 Floor - Imaging	3-5 $\mu$ R		
20 Floor - Imaging	3-5 $\mu$ R		
21 Floor - Imaging	3-5 $\mu$ R		
22 Floor - Imaging	3-5 $\mu$ R		
23 Floor - Imaging	3-5 $\mu$ R		
24 Floor - Imaging	3-5 $\mu$ R		
25 Floor - Imaging	3-5 $\mu$ R		
26 Floor - Imaging	3-5 $\mu$ R		
27 Floor - Imaging	3-5 $\mu$ R		
28 Floor - Imaging	3-5 $\mu$ R		
29 Floor - Imaging	3-5 $\mu$ R		
30 Floor - Imaging	3-5 $\mu$ R		
31 Floor - Imaging	3-5 $\mu$ R		
32 Floor - Imaging	3-5 $\mu$ R		
33 Floor - Imaging	3-5 $\mu$ R		
34 Floor - Imaging	3-5 $\mu$ R		

**REMARKS:** The above area surveys were acquired of the assigned areas with a micro R meter. All readings fell within the room background reading of 3-5  $\mu$ R/hr.

**PERFORMED BY:** \_\_\_\_\_

For: Cardinal Health 414, Inc. Medical & Health Physics  
 Nebraska Registry #50

**CLOSE-OUT WIPE TEST****DATE:** 14-Dec-09**LICENSEE:** Kansas City Cardiology - Prospect: Kansas City, MO**INSTRUMENT:** Cobra II Auto Gamma MCA**CAL DATE:** 10/29/2009**LOCATION:** Hot Lab and Imaging**ACTION LEVEL:** 200 dpm/100 cm<sup>2</sup>

<u>Location</u>	<u>Results</u>	<u>Location</u>	<u>Results</u>
1 Background	0 CPM (110-170 KEV)	35 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>
2 Floor - Hot Lab	<200 dpm/100 cm <sup>2</sup>	36 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>
3 Floor - Hot Lab	<200 dpm/100 cm <sup>2</sup>	37 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>
4 Floor - Hot Lab	<200 dpm/100 cm <sup>2</sup>	38 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>
5 Floor - Hot Lab	<200 dpm/100 cm <sup>2</sup>	39 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>
6 Floor - Hot Lab	<200 dpm/100 cm <sup>2</sup>	40 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>
7 Floor - Hot Lab	<200 dpm/100 cm <sup>2</sup>	41 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>
8 Well Counter - Hot Lab	<200 dpm/100 cm <sup>2</sup>	42 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>
9 Dose Calibrator - Hot Lab	<200 dpm/100 cm <sup>2</sup>	43 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>
10 Counter - Hot Lab	<200 dpm/100 cm <sup>2</sup>	44 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>
11 Receiving Area - Hot Lab	<200 dpm/100 cm <sup>2</sup>	45 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>
12 Sink - Hot Lab	<200 dpm/100 cm <sup>2</sup>	46 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>
13 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>	47 Processing Comp - Imaging	<200 dpm/100 cm <sup>2</sup>
14 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>	48 Acquisition Comp - Imaging	<200 dpm/100 cm <sup>2</sup>
15 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>	49 Syntrac - Imaging	<200 dpm/100 cm <sup>2</sup>
16 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>	50 Camera Bed - Imaging	<200 dpm/100 cm <sup>2</sup>
17 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>	51 Camera Heads - Imaging	<200 dpm/100 cm <sup>2</sup>
18 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>		
19 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>		
20 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>		
21 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>		
22 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>		
23 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>		
24 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>		
25 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>		
26 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>		
27 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>		
28 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>		
29 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>		
30 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>		
31 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>		
32 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>		
33 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>		
34 Floor - Imaging	<200 dpm/100 cm <sup>2</sup>		

**REMARKS:** The above close-out wipe tests were acquired of the assigned areas. The sample areas consisted of a contiguous wipe from a 3.0' X 3.0' area or approximately 8,400 cm<sup>2</sup>

**PERFORMED BY:** \_\_\_\_\_

For: Cardinal Health 414, Inc. Medical & Health Physics  
Nebraska Registry #50



16 Dec 2009 14:10

Protocol #: 8

Cardinal Medical & Health Physics  
DECOMMISSIONING WIPE

Page #1

User : MDI

tech ID: NDP  
KANSAS CITY CARDIG (PROSPECT) HOT LAB/IMAGING ROOM  
Count Time(minutes): 1.00  
Assay Type: CPM  
Background Subtract : IPA Bkg  
Outlier: 5.0 FLAG  
Dilution Operator : \*  
XSpillup: 0.00  
XSpilldown: 0.00  
Screening: OFF

	Window A		Window B		Window C	
Nuclide:	Co-57	75 - 165 keV	K40	562 - 762 keV	K40	15 - 2000 keV
Bkg:	42.8		35.9		309	
Sigma:	0.00		0.00		1.60	
LCR:	0		0		0	
Half Life(hours):	0.00		0.00			
Multiplier:	2.0000					
XCV Flag Limit:	0.00		0.00			

S#	TIME	A:CPM	B:CPM	C:CPM	DCPM	PAT/ID
1	1.00	20	6	4	40	BACKGROUND
2	1.00	7	6	13	14	HOT LAB FLOOR
3	1.00	0	5	2	0	HOT LAB FLOOR
4	1.00	2	0	7	4	HOT LAB FLOOR
5	1.00	0	5	0	0	HOT LAB FLOOR
6	1.00	5	0	33	10	HOT LAB FLOOR
7	1.00	0	0	0	0	HOT LAB FLOOR
8	1.00	8	4	9	16	WELL COUNTER
9	1.00	10	0	0	20	DOSE CALIBRATOR
10	1.00	0	0	0	0	HOT LAB COUNTER
11	1.00	5	1	25	10	RECEIVING AREA
12	1.00	1	0	0	2	HOT LAB SINK
13	1.00	0	0	0	0	IMAGING ROOM 1 FLOOR
14	1.00	13	0	19	26	IMAGING ROOM 1 FLOOR
15	1.00	0	0	8	0	IMAGING ROOM 1 FLOOR
16	1.00	0	0	0	0	IMAGING ROOM 1 FLOOR
17	1.00	0	0	17	0	IMAGING ROOM 1 FLOOR
18	1.00	8	0	17	16	IMAGING ROOM 1 FLOOR
19	1.00	0	3	0	0	IMAGING ROOM 1 FLOOR
20	1.00	8	8	29	16	IMAGING ROOM 1 FLOOR
21	1.00	0	4	1	0	IMAGING ROOM 1 FLOOR
22	1.00	0	0	0	0	IMAGING ROOM 1 FLOOR
23	1.00	1	2	0	2	IMAGING ROOM 1 FLOOR
24	1.00	24	8	47	48	IMAGING ROOM 1 FLOOR
25	1.00	0	2	24	0	IMAGING ROOM 1 FLOOR
26	1.00	0	0	0	0	IMAGING ROOM 1 FLOOR
27	1.00	0	0	0	0	IMAGING ROOM 1 FLOOR
28	1.00	3	3	4	10	IMAGING ROOM 1 FLOOR
29	1.00	0	0	0	0	IMAGING ROOM 1 FLOOR
30	1.00	0	0	0	0	IMAGING ROOM 1 FLOOR
31	1.00	0	0	4	0	IMAGING ROOM 1 FLOOR

16 Dec 2009 14:52

Cardinal Medical & Health Physics  
DECOMMISSIONING WIPE

Page #2  
User : MDI

Protocol #: 8

S#	TIME	A:CPM	B:CPM	C:CPM	CCPM	PAT/ID
32	1.00	0	0	0	0	IMAGING ROOM 1 FLOOR
33	1.00	0	0	0	0	IMAGING ROOM 1 FLOOR
34	1.00	0	0	15	0	IMAGING ROOM 1 FLOOR
35	1.00	0	0	7	0	IMAGING ROOM 1 FLOOR
36	1.00	0	0	0	0	IMAGING ROOM 1 FLOOR
37	1.00	0	0	1	0	IMAGING ROOM 1 FLOOR
38	1.00	12	12	52	24	IMAGING ROOM 1 FLOOR
39	1.00	1	6	10	2	IMAGING ROOM 1 FLOOR
40	1.00	0	0	17	0	IMAGING ROOM 1 FLOOR
41	1.00	0	0	33	0	IMAGING ROOM 1 FLOOR
42	1.00	0	0	0	0	IMAGING ROOM 1 FLOOR
43	1.00	0	0	0	0	IMAGING ROOM 1 FLOOR
44	1.00	4	0	0	8	IMAGING ROOM 1 FLOOR
45	1.00	3	3	0	10	IMAGING ROOM 1 FLOOR
46	1.00	0	0	0	0	IMAGING ROOM 1 FLOOR
47	1.00	5	0	10	10	PROCESSING TERMINAL
48	1.00	0	4	0	0	ACQUISITION TERMINAL
49	1.00	0	0	8	0	SYNTRAC
50	1.00	3	10	14	6	CAMERA BED
51	1.00	0	1	24	0	CAMERA HEADS

S#	TIME	CPMA	DPM1	MDA at 95% CL
1	1.00	20		
2	1.00	0	0	23.5 cps above background.
3	1.00	0	0	
4	1.00	0	0	
5	1.00	0	0	
6	1.00	0	0	
7	1.00	0	0	
8	1.00	0	0	
9	1.00	0	0	
10	1.00	0	0	
11	1.00	0	0	
12	1.00	0	0	
13	1.00	0	0	
14	1.00	0	0	
15	1.00	0	0	
16	1.00	0	0	
17	1.00	0	0	
18	1.00	0	0	
19	1.00	0	0	
20	1.00	0	0	
21	1.00	0	0	
22	1.00	0	0	
23	1.00	0	0	
24	1.00	4	0	
25	1.00	0	0	
26	1.00	0	0	
27	1.00	0	0	
28	1.00	0	0	
29	1.00	0	0	
30	1.00	0	0	
31	1.00	0	0	
32	1.00	0	0	
33	1.00	0	0	
34	1.00	0	0	
35	1.00	0	0	

26	1.00	0	0
27	1.00	0	0
28	1.00	0	0
29	1.00	0	0
30	1.00	0	0
31	1.00	0	0
32	1.00	0	0
33	1.00	0	0
34	1.00	0	0
35	1.00	0	0
36	1.00	0	0
37	1.00	0	0
38	1.00	0	0
39	1.00	0	0
40	1.00	0	0
41	1.00	0	0
42	1.00	0	0
43	1.00	0	0
44	1.00	0	0
45	1.00	0	0
46	1.00	0	0
47	1.00	0	0
48	1.00	0	0
49	1.00	0	0
50	1.00	0	0
51	1.00	0	0

Section 11

Form 117A

### LEAK TEST CERTIFICATE

**DATE:** 11-24-2009

**LICENSEE:** Kansas City Cardiology Associates - Prospect location; Kansas City, MO


**COUNTING INSTRUMENT:** Packard Cobra II Auto Gamma (MCA)

NUCLIDE	TYPE	SERIAL #	ACTIVITY	RESULTS
1. Co <sup>57</sup>	Flood	1338-122	7.44 mCi	<0.005 μCi
2. Cs-137	Vial	788-87-3	173.8 μCi	<0.005 μCi

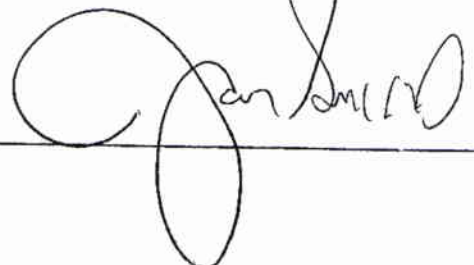
**REMARKS:** This wipe test samples taken from the sources listed above contained less than 0.005 μCi of removable radioactive material. The sources are considered to be free of contamination and may remain in service until the next scheduled leak test.

**NOTE:** The Co-57 Flood Source with Serial Number 1256-009 was returned to the Manufacturer for disposal. All of the proper paperwork is on file in the Records Manual.

**PERFORMED BY:**

  
 FOR: CARDINAL HEALTH MEDICAL & HEALTH PHYSICS  
 State of Nebraska Registry Number: 50

**R.S.O.:**

  
 \_\_\_\_\_

24 Nov 2009 10:47

Cardinal Medical & Health Physics  
LEAK TEST

Page #1

User : KM

Tech ID: KN  
 KANSAS CITY CARD ASSOC (PROSPECT); KANSAS CITY, MO  
 Count Time(minutes): 1.00  
 Assay Type: CPM  
 Background Subtract : IPA Bkg  
 Outlier: 5.0 FLAG  
 Dilution Operator : 1  
 ZSpillup: 0.00  
 ZSpilldown: 0.00  
 Screening: OFF

	Window A		Window B		Window C	
Nuclide:	Co-57	75 - 165 keV	MAN	562 - 762 keV	MAN	15 - 2000 keV
Bkg:	42.2		32.6		305	
Sigma:	0.00		0.00		1.00	
LCR:	0		0		0	
Half Life(hours):	0.00		0.00			
Multiplier:	2.0000					
ZCV Flag Limit:	0.00		0.00			

S#	TIME	A:CPM	B:CPM	C:CPM	CCPM	PAT/ID
1	1.00	18	0	54	36	BACKGR:JUND
2	1.00	4	4	0	8	CO-57 FLOOD #1338-122
3	1.00	0	0	0	0	CS-137 VIAL #788-87-3

S#	TIME	CPMA	DPM1	MDA at 95% CL:
1	1.00	18		
2	1.00	0	0	22.5 cpm above background.
3	1.00	0	0	



Cardinal Health  
Medical & Health Physics, Kansas City  
816.841.5093 Phone  
816.974.1443 Fax

# Fax

# CONFIDENTIAL

**To:** Jose - NRE **From:** Marcia West, BS, CNMT, MHP

**Fax:** 630-515-1078 **Pages:** 21

**Phone:** **Date:**

**Re:** Control# 318779

Urgent     For Review     Please Comment     Please Reply     Please Recycle

Jose,  
Here is our resubmission. I believe everything is up to date now.

Sincerely,  
Marcia West