

**MATERIALS LICENSING BRANCH  
UNITED STATES NUCLEAR REGULATORY COMMISSION**

REGION III  
2443 WARRENVILLE ROAD STE 210  
LISLE, ILLINOIS 60532-4352  
OFFICE: (630)-829-9892 FAX: (630) 515-1078

**CONVERSATION RECORD  
ACTUALLY FAXED?**

| TIME

| DATE

YES.

03/24/2010

NAME OF PERSON(S) CONTACTED

ORGANIZATION

TELEPHONE NO.

Marcia West, consultant

Kansas City Cardiology Associates, Inc.

O: 816-807-8090

F: 816-974-1443

SUBJECT

License No.: 24-32245-01

Control No.: 318779

SUMMARY

We have reviewed your license amendment request/transfer of ownership dated January 27, 2010, and find that we need additional information as follows:

1. You requested to have 6420 Prospect Avenue, Suite T-509, Kansas City, Missouri to be removed from your license. We cannot authorize licensees to release the areas (excepting areas covered by 10 CFR 35.13(e) and 35.14(b)(4)) or locations of use from licenses for unrestricted use (even by other members of their staff) until we have received and reviewed a copy of the results of decommissioning and close-out surveys for the facilities.

Please respond by stating exactly which licensed materials were used at this location historically and please submit final status survey information covering those radioactive materials.

The final status survey should consist of exposure rate measurements to show that all sources of radioactive material have been removed, and contamination checks of areas where radioactive materials were used or stored.

Please submit the following information with your close-out survey (refer to 10 CFR 30.36(j)(2)):

- a. Diagrams of each facility with exposure rate survey and wipe test results keyed to specific locations, as appropriate.
- b. The name of the person performing the survey.
- c. The date the survey was performed.
- d. The instrument(s) used for exposure rate measurements and for analysis of the wipes.
- e. Background readings and each instruments' efficiency or correction factor.
- f. The date(s) that the survey instruments were last calibrated.

RECEIVED MAR 30 2010

- g. The action levels for both exposure rate measurements and wipe tests. Include the identity of areas exceeding these levels, corrective actions taken and results of corrective actions taken.
2. Also, in order to release as an unrestricted area of use, please provide the most current leak test results for your sealed sources.

We will be unable to continue processing your request until we receive this information. In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically in the NRC Public Document Room or from the Publicly Available Record (PARS) component of NRC's document system (ADAMS) accessible from the NRC Website at <http://www.nrc.gov/reading-rem/adams.html>.

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**ACTION REQUIRED**

Please submit a written response within 7-days or contact me to arrange an alternate response date. Be sure to reference control number 318779 to facilitate correct processing of your response.

If we do not receive a written response within 7-days, please note that we may void this request in order to enable you to prepare a quality response without time constraints. This would be done without prejudice to the resubmission of your request at a later date. Upon receipt of your response we will resume our review. Address your written response to my attention at the above address.

Please note that a "Void" is an administrative procedure that puts your amendment request "On Hold" (takes it out of our active casework database) until you reactivate it via submission of a written response.

Upon receipt of your response we will resume our review.

**PLEASE DIRECT ANY QUESTIONS YOU MAY HAVE TO ME AT (630) 829-9892.**

NAME OF PERSON DOCUMENTING CONVERSATION	SIGNATURE	DATE
Jose Macatangay	<i>Jose Macatangay</i>	03/24/2010

03/24/2010 conversation w/ Marcia West, consultant :

Spoke w/ Marcia West & indicated that we have not received the close-out surveys for the LEAD Prospect Ave, Suite T-509, Kansas City, MO location. Ms. West indicated that she would be able to send this shortly (by week of 03/29/2010).

03/24/2010 conversation w/ David Ireland, CFO of KC Cardiology :

Since Marcia West, consultant, was only on the fax cover, I verified with David Ireland, CFO of Kansas City Cardiology Assoc., Inc. that Ms. West was the health physicist consultant. Mr. Ireland indicated that Ms. West ~~is~~ their health physicist consultant and can contact her about this request.



Cardinal Health  
Medical & Health Physics Services  
9668 Marion Ridge  
Kansas City, MO 64137  
816.965.0330 tel  
816.966.2040 fax

[www.cardinal.com](http://www.cardinal.com)

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,

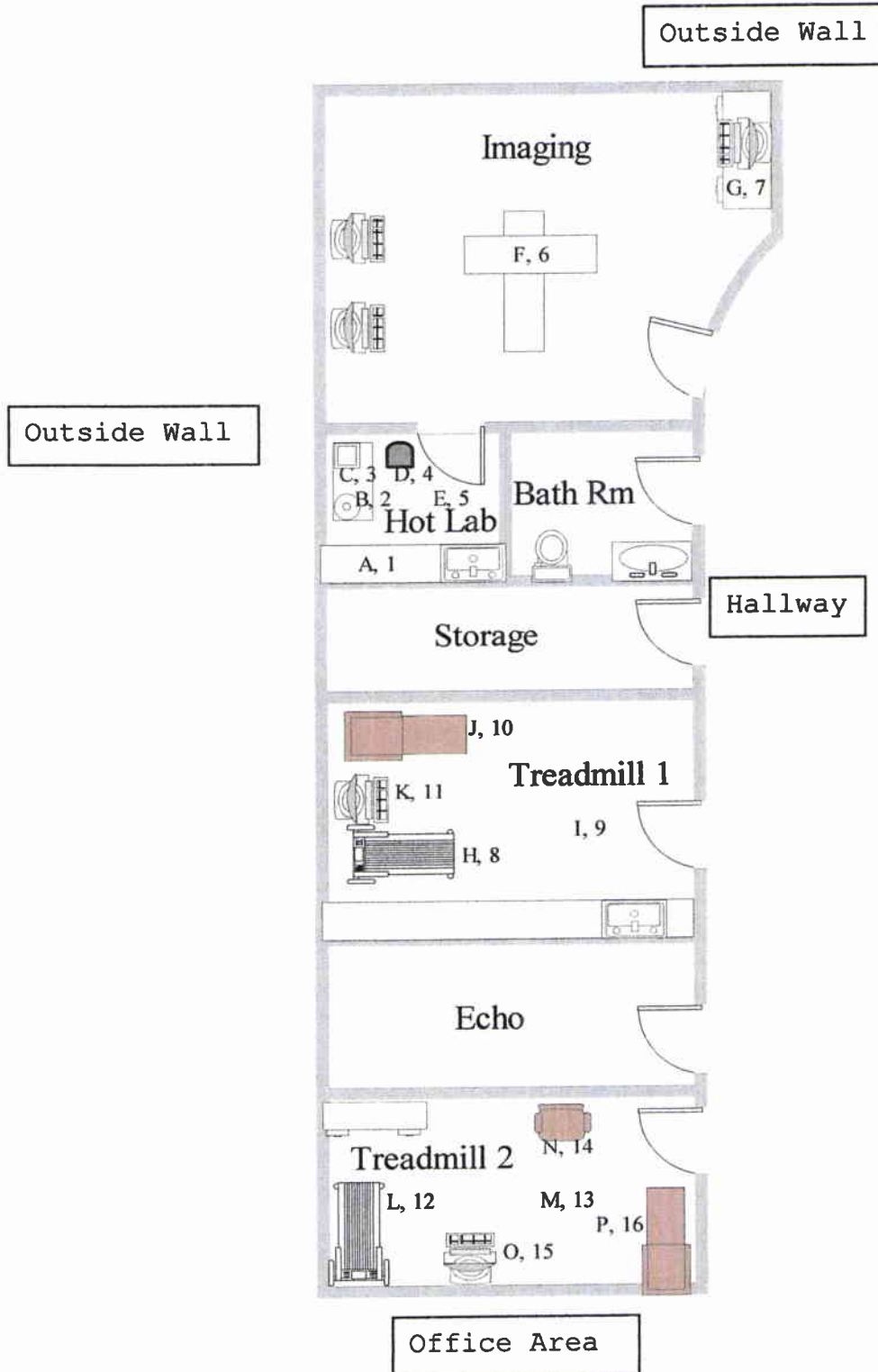
A handwritten signature in blue ink, appearing to read "Marcia R. West".

Marcia R. West  
Regional Health Physicist

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



## **History of Radionuclides and Instruments**

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

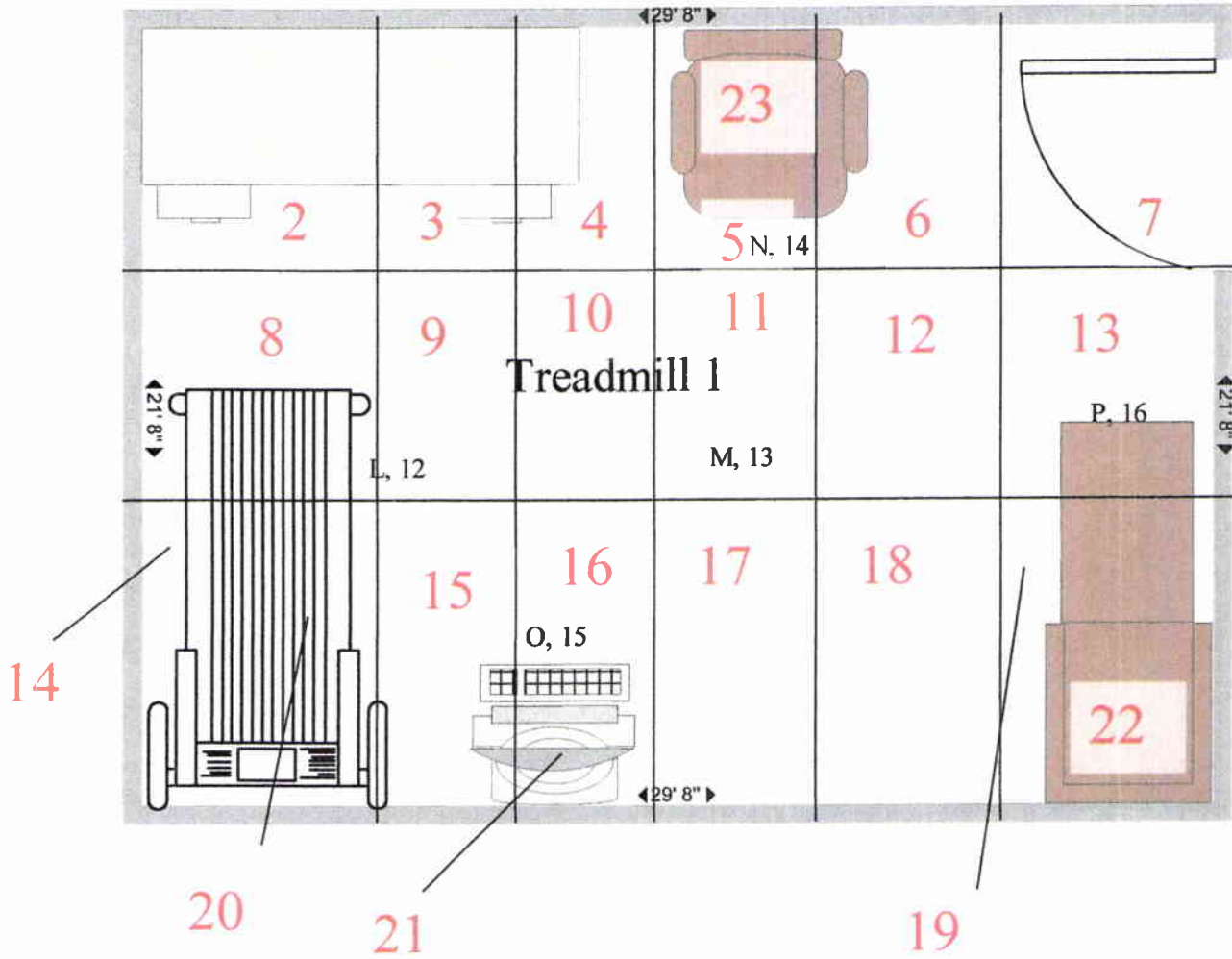
**The only radionuclide used in any of the areas decommissioned was Technetium 99m.  
No other radionuclides were ever used.**

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

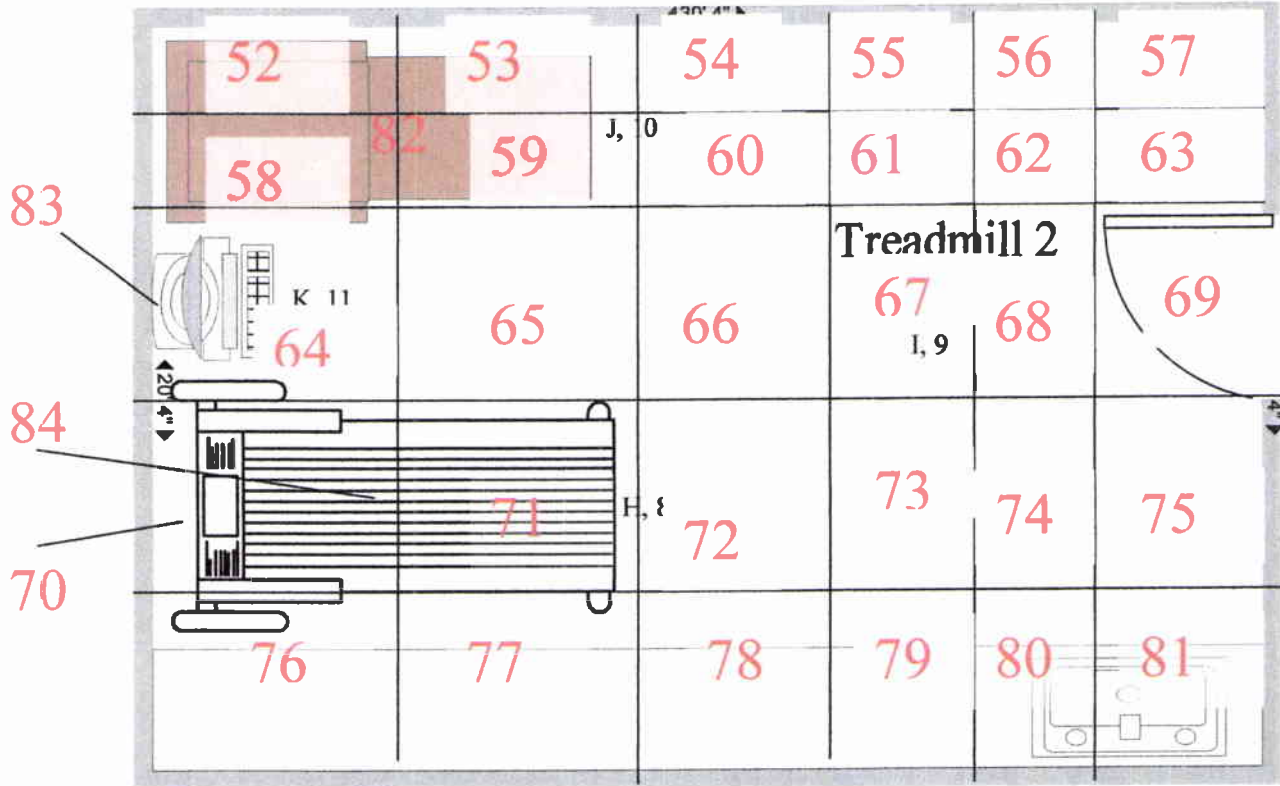
**All of the paperwork regarding the transfer is on file and up to date.**

**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 – Prospect  
Decommissioning Wipes 12-14-09



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



## CLOSE-OUT WIPE TEST

**DATE:** 14-Dec-09  
**LICENSEE:** Kansas City Cardiology - Prospect; Kansas City, MO  
**INSTRUMENT:** Cobra II Auto Gamma MCA  
**LOCATION:** Treadmill Rms 1 and 2

<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



**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

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

**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 µR/hr.

**PERFORMED BY:** 

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

Test ID: MDP  
 KANSAS CITY CARDIO (PROSPECT) TX ROOM 1/TM ROOM 2  
 Count Time(minutes): 1.00  
 Assay Type: CPM  
 Background Subtract: IPA Bkg  
 Outlier: 5.0 FLAG  
 Dilution Operator: #  
 %Spillup: 0.00  
 %Spillover: 0.00  
 Screening: OFF

Nuclide:	Window A		Window B		Window C	
	Co-57	75 - 165 keV	KAN	162 - 760 keV	KAN	15 - 2000 keV
Bkg:	42.8		35.8		309	
Sigma:	0.00		0.00		1.00	
LDR:	0		0		0	
Half Life(hours):	0.00		0.00			
Multiplier:	2.0000					
%CV Flag Limit:	0.00		0.00			

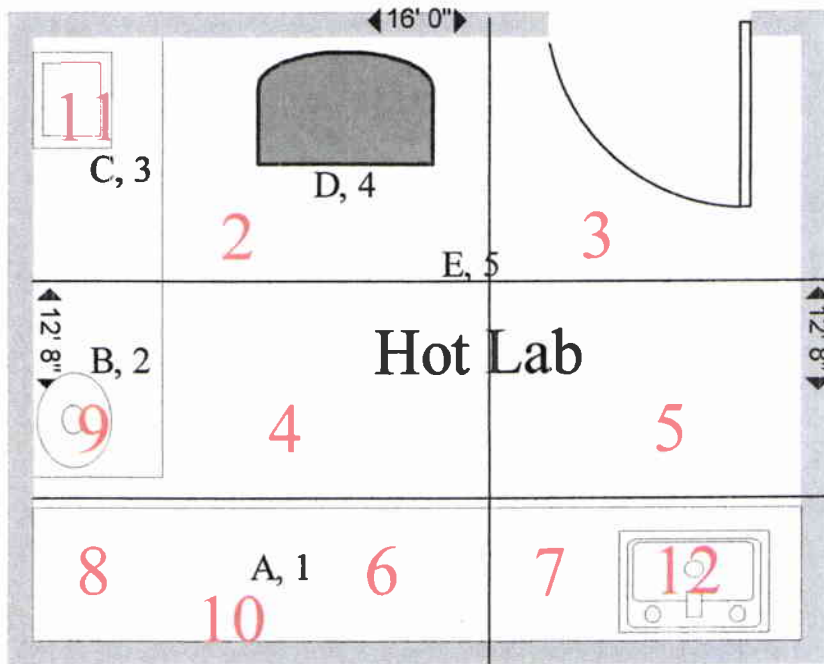
SN	TIME	A:CPM	B:CPM	C:CPM	DDPM	PAT/ID
1	1.00	1	3	36	2	TREADMILL ROOM 1 FLOOR
2	1.00	10	3	36	20	TREADMILL ROOM 1 FLOOR
3	1.00	0	0	9	0	TREADMILL ROOM 1 FLOOR
4	1.00	0	0	0	0	TREADMILL ROOM 1 FLOOR
5	1.00	4	6	0	9	TREADMILL ROOM 1 FLOOR
6	1.00	12	5	18	24	TREADMILL ROOM 1 FLOOR
7	1.00	0	0	0	0	TREADMILL ROOM 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	0	0	2	TREADMILL ROOM 1 FLOOR
11	1.00	0	0	0	0	TREADMILL ROOM 1 FLOOR
12	1.00	0	3	8	0	TREADMILL ROOM 1 FLOOR
13	1.00	0	12	20	0	TREADMILL ROOM 1 FLOOR
14	1.00	15	3	2	32	TREADMILL ROOM 1 FLOOR
15	1.00	0	0	0	0	TREADMILL ROOM 1 FLOOR
16	1.00	3	7	36	5	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	TX ROOM 1 TREADMILL
20	1.00	3	0	11	6	TX ROOM 1 EXG
21	1.00	0	6	0	0	TX ROOM 1 DEC
22	1.00	0	0	0	0	TX 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	8	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

S#	TIME	A:CPM	B:CPM	C:CPM	DBPM	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	3	0	14	TREADMILL ROOM 2 FLOOR
44	1.00	3	2	16	4	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	31	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	1	10	35	6	TREADMILL ROOM 2 FLOOR
53	1.00	2	11	18	4	TM ROOM 2 5KB
54	1.00	0	0	0	0	TM ROOM 2 5KB
55	1.00	0	0	0	0	TM ROOM 2 TREADMILL

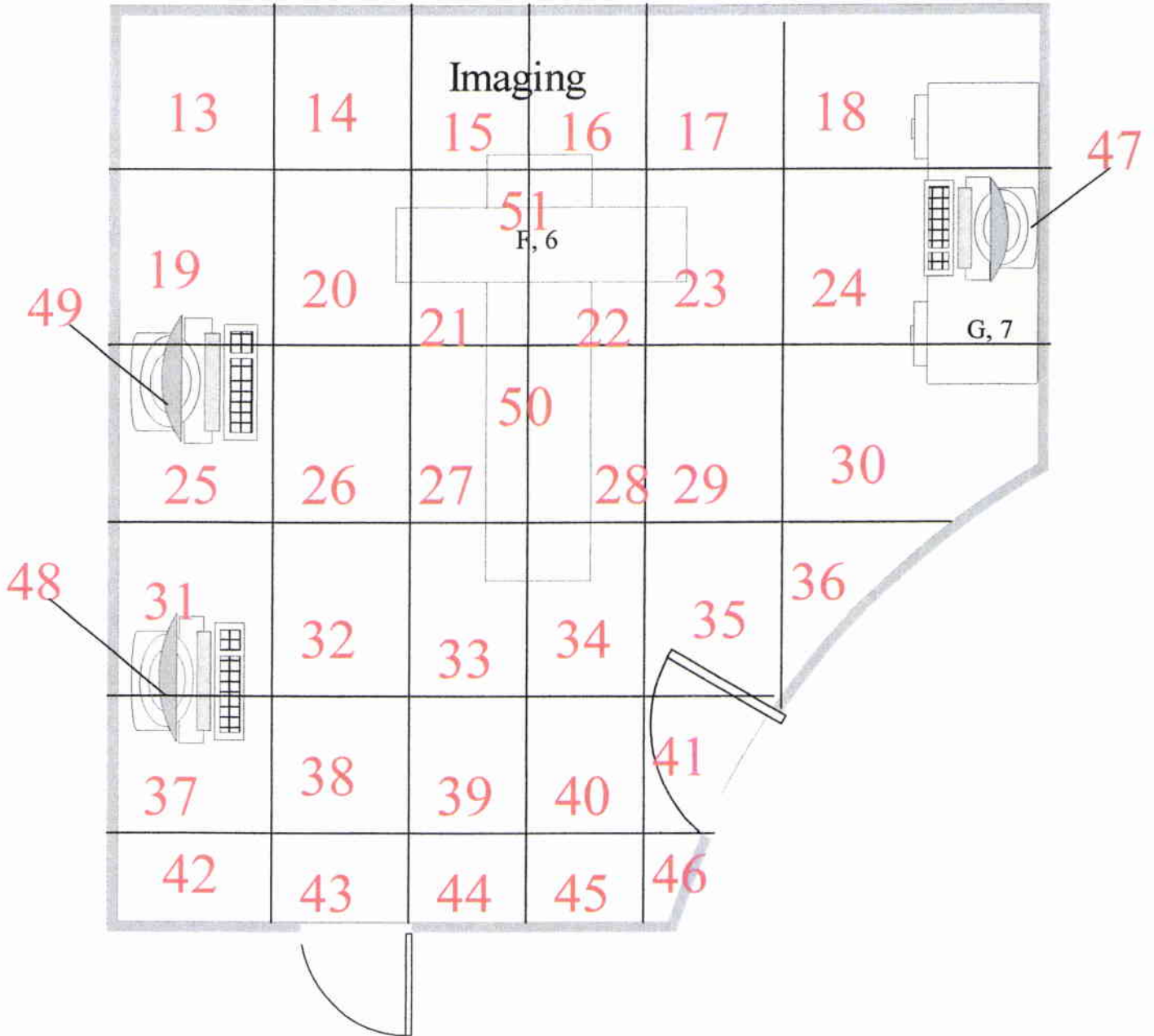
SN	TIME	CPMA	DPM1	MDA at 95% CL
1	1.00	1		
2	1.00	9	18	7.4 cpm above background.
3	1.00	0	0	
4	1.00	0	0	
5	1.00	3	0	
6	1.00	11	22	
7	1.00	0	0	
8	1.00	3	0	
9	1.00	0	0	
10	1.00	0	0	
11	1.00	0	0	
12	1.00	0	0	
13	1.00	0	0	
14	1.00	15	30	
15	1.00	0	0	
16	1.00	2	0	
17	1.00	0	0	
18	1.00	0	0	
19	1.00	0	0	
20	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	

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
<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 WIPE TEST

**DATE:** 14-Dec-09  
**LICENSEE:** Kansas City Cardiology - Prospect: Kansas City, MO  
**INSTRUMENT:** Cobra II Auto Gamma MCA  
**LOCATION:** Hot Lab and Imaging

<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

**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

<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



ech ID: XDP  
 KANSAS CITY CARDIAC (PROSPECT) HOT LAB/IMAGINE ROOM  
 Count Time(minutes): 1.00  
 Assay Type: CPX  
 Background Subtract: IPA Skg  
 Outlier: 5.0 FLAG  
 Dilution Operator: X  
 XSpillup: 0.00  
 XSpilldown: 0.00  
 Screening: OFF

	Window A	Window B	Window C
Nuclide:	Cs-57 75 - 165 keV	MAX 562 - 762 keV	MAX 15 - 2000 keV
Bkg:	42.2	35.8	309
Signa:	0.00	0.00	1.00
LOR:	0	0	0
Half Life(hours):	0.00	0.00	
Multplier:	2.0000		
XCV Flag Limit:	0.00	0.00	

S#	TIME	A:CPM	B:CPM	C:CPM	CCPM	PAY 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	14	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	28	10	RECEIVING AREA
12	1.00	1	0	8	2	HOT LAB SINK
13	1.00	0	0	0	0	IMAGINE ROOM 1 FLOOR
14	1.00	13	0	19	26	IMAGINE ROOM 1 FLOOR
15	1.00	0	0	8	0	IMAGINE ROOM 1 FLOOR
16	1.00	0	0	0	0	IMAGINE ROOM 1 FLOOR
17	1.00	0	0	17	0	IMAGINE ROOM 1 FLOOR
18	1.00	8	0	17	14	IMAGINE ROOM 1 FLOOR
19	1.00	0	3	0	0	IMAGINE ROOM 1 FLOOR
20	1.00	8	8	20	14	IMAGINE ROOM 1 FLOOR
21	1.00	0	4	1	0	IMAGINE ROOM 1 FLOOR
22	1.00	0	0	0	0	IMAGINE ROOM 1 FLOOR
23	1.00	1	2	0	2	IMAGINE ROOM 1 FLOOR
24	1.00	24	8	47	40	IMAGINE ROOM 1 FLOOR
25	1.00	0	2	24	0	IMAGINE ROOM 1 FLOOR
26	1.00	0	0	0	0	IMAGINE ROOM 1 FLOOR
27	1.00	0	0	0	0	IMAGINE ROOM 1 FLOOR
28	1.00	5	3	4	10	IMAGINE ROOM 1 FLOOR
29	1.00	0	0	0	0	IMAGINE ROOM 1 FLOOR
30	1.00	0	0	0	0	IMAGINE ROOM 1 FLOOR
31	1.00	0	0	4	0	IMAGINE ROOM 1 FLOOR

SN	TIME	A:CPM	B:CPM	C:CPM	CLPM	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	0	0	0	8	IMAGING ROOM 1 FLOOR
45	1.00	0	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	0	0	SYNTRAC
50	1.00	3	10	14	3	CAMERA BED
51	1.00	0	1	24	0	CAMERA HEADS

SN	TIME	CPM	CPM	MDA @ 95% CL
1	1.00	20		
2	1.00	0	0	23.5 dpm 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	

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

**R.S.O.:** \_\_\_\_\_

Protocol #: 8

LEAK TEST

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 : \*  
 YSpillup: 0.00  
 YSpilldown: 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	BACKGROUND
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	DFM1	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 Services  
9668 Marion Drive  
Kansas City, MO 64137



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

*Control no: 318779*

