

3901 Rainbow Boulevard
Kansas City, Kansas 66109-7200
Phone: 913-588-9618
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Fax

To: Jose Macatangay From: Mik Falkenberg
 Fax: _____ Pages: 14
 Phone: 913-588-9609 Date: 12/9/2009
 Re: Control # 318564 CC: _____

- Urgent For Review Please Comment Please Reply Please Recycle

CONFIDENTIAL

• Comments:

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 Liberty office: 2521 Glenn Hendren Drive, Suite 302 Liberty, MO 64068 Phone: 816-781-1696
 KU Med West office: 7405 Renner Rd. Shawnee, KS 66217 Phone: 913-588-3500

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December 7, 2009

Nuclear Materials Licensing Branch
US Nuclear Regulatory Commission
Region III
2443 Warrenville Road, Suite 210
Lisle, Illinois 60532-4352

Control# 318564
Notification RE: Byproduct Materials License Number 24-26254-01

Dear Jose Macatangay,

The following is a written response to your request for the following information:

1. We would like the 2521 Glenn Hendren Drive location to be removed from our license.
2. No change in ownership; only change in name to Mid-America Cardiology Associates, Inc.
3. Please see attached revised forms from DTC (Pages 1 - 9)
4. I have attached the last sealed source leak test certificate before this site was closed in August.

If you have any questions, please contact Mike Feldkamp, CNMT or myself.

Sincerely yours



Thomas L. Rosamond, M.D.
Radiation Safety Officer
Mid-America Cardiology Associates, Inc.

Administration - 5799 Broadmoor, Suite 200, Mission, Kansas 66202 (913) 588-9500
University of Kansas Hospital - 3901 Rainbow Boulevard, Kansas City, Kansas 66109-7200 913-588-9600
Overland Park - 10100 West 119th Street, Suite 250, Overland Park, Kansas 66213, 913-588-9400
Atchison - 1301 North 2nd Street, Atchison, Kansas 66002 (913) 367-3100
Toll Free Number for Physicians Outside the Kansas City Area 1-800-365-5510
(Available between 8:00 a.m. - 5:00 p.m. Monday - Friday)

JOSE D. MACATANGAY
MATERIALS LICENSING BRANCH
UNITED STATES NUCLEAR REGULATORY COMMISSION

REGION III
2443 WARRENVILLE ROAD STE 210
LISLE, ILLINOIS 60532-4352
OFFICE: (630)-829-8892 FAX: (630) 515-1078

CONVERSATION RECORD
ACTUALLY FAXED?

Yes

TIME

DATE

12/04/2009

NAME OF PERSON(S) CONTACTED

Thomas L. Rosamond, M.D., RSO
or Mike Feldkamp, CNMT

ORGANIZATION

Thomas L. Rosamond, M.D
Mid-America Cardiology, Assoc., Inc.

TELEPHONE NO.

O: 816-781-1696
F: 913-588-9755

SUBJECT

License No.: 24-26254-01

Control No.: 318564

SUMMARY

We have reviewed your amendment request dated September 16, 2009, and find that we need additional information as follows:

1. Please verify that the 2521 Glenn Hendren Drive location is to be removed from your license.
2. Please verify that there is no change in ownership, only a change in name.
3. From your submitted close-out surveys and wipe test results, please clarify the following:
 - a. Equation used to determine that the wipe contained no activity;
 - b. The net cpm results and efficiency of your counting instrument;
 - c. The wipe test results are missing for the camera room;
 - d. The grid numbers are missing for the camera room and hot lab.
4. Per my telephone conversation on December 4, 2009, with Mike Feldkamp, sealed sources were stored in the use area. 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>.

ACTION REQUIRED

Please submit a written response within 10-days or contact me to arrange an alternate response date. Be sure to reference control number 318564 to facilitate correct processing of your response.

If we do not receive a written response within 10-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.



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RADIATION AREA AND WIPE TEST SURVEY
Mid America Cardiology - Liberty
Date of Survey: August 17, 2009
Performed by: Ed Crouch and Ruth Schukman-Dakotas

Radiation Survey:

All areas noted on the facility diagram were monitored with a Bicon Model 2000 GM survey meter with a PGM probe, Serial Number A190N, calibrated 4/8/09. The background reading was 0.05-0.1 mr/hr. No area monitored more than background.

Wipe Test Survey:

All areas noted were wiped with an alcohol swab. The swabs were counted in the DTC well counter for one minute. The results of the counting are noted in the attached tables.

If the cpm for a wipe sample was less than or equal to the following equation,

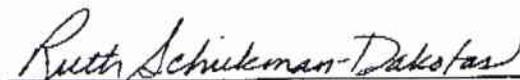
$$\text{Bkg} + 4.66(\text{Bkg})^{1/2}$$

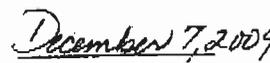
there is a 99.9998% chance that the the counts are attributable to background and not to radioactive contamination present on the wipe.

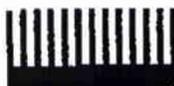
For the equipment used to analyze the wipes, the counting efficiency is about 61-66% and the minimum detectable activity (MDA) for radionuclides with energies similar to Tc^{99m} and Tl²⁰¹ is about 3.2E-5 uCi.

Results of Survey and Contamination Assessment:

No contamination or residual radioactivity were detected in the Hot Lab, Camera Room, or the Stress Test Room.


Ruth Schukman-Dakotas
Health Physicist


Date



Mid America Cardiology - Liberty
RESULTS OF WIPE TEST SURVEY
FOR DECOMMISSIONING OF CAMERA ROOM
 Performed by: Diagnostic Technology Consultants, Inc.
 Ed Crouch and Ruth Schukman-Dakotas
 Date of Survey: August 17, 2009

Wipe Number*	Area Wiped	Counts per minute (cpm)	Net cpm	Removed Activity (dpm)	Results
1	Floor (grid 0-10)	79	14	NDA	Acceptable
2	Floor (grid 11-24)	79	14	NDA	Acceptable
3	Floor (grid 25-38)	79	14	NDA	Acceptable
4	Floor (grid 39-51)	57	-8	NDA	Acceptable
5	Floor (grid 52-69)	57	-8	NDA	Acceptable
6	Floor (grid 70-92)	57	-8	NDA	Acceptable
7	Floor (grid 93-112)	66	1	NDA	Acceptable
8	Floor (grid 113-130)	66	1	NDA	Acceptable
9	Floor (grid 131-146)	66	1	NDA	Acceptable
10	Floor (grid 147-162)	82	17	NDA	Acceptable
11	Floor camera pad	82	17	NDA	Acceptable
12	End of floor adjacent to Hot Lab (grid 16)	82	17	NDA	Acceptable
13	Narrow floor W of camera (183-195)	81	16	NDA	Acceptable
14	Overhead cabinets & handles	81	16	NDA	Acceptable
15	Camera work station	81	16	NDA	Acceptable
16	Counter top	81	16	NDA	Acceptable
17	Camera head & gurney	81	16	NDA	Acceptable
BKG		65			

NDA = No detectable activity

If the sample wipe count is $\leq [Bkg + 4.66(Bkg)^{1/2}] \leq 103$ cpm, then the counts are 99.9998% from background rather than radioactivity.

All radiation level readings were ≤ 0.1 mR/hr (see attached floor plan)

Mid America Cardiology - Liberty
RESULTS OF WIPE TEST SURVEY
FOR DECOMMISSIONING OF HOT LAB
 Performed by: Diagnostic Technology Consultants, Inc.
 Ed Crouch and Ruth Schukman-Dakotas
 Date of Survey: August 17, 2009

Wipe Number*	Area Wiped	Counts per minute (cpm)	Net cpm	Removed Activity (dpm)	Results
1	Door (handle and frame)	93	28	NDA	Acceptable
2	Drawer handles/cabinet handles	93	28	NDA	Acceptable
3	Sink & cabinet & inside drawers	93	28	NDA	Acceptable
4	Cabinets	85	20	NDA	Acceptable
5	Under sink & plumbing parts	85	20	NDA	Acceptable
6	Inside cabinets	85	20	NDA	Acceptable
7	Cabinet handles	60	-5	NDA	Acceptable
8	Counter top	60	-5	NDA	Acceptable
9	Floor (grid 1-9)	60	-5	NDA	Acceptable
10	Floor (grid 10-16)	84	19	NDA	Acceptable
11	Floor (grid 17-23)	84	19	NDA	Acceptable
12	Floor (grid 24-30)	84	19	NDA	Acceptable
13	Floor (grid 31-37)	67	2	NDA	Acceptable
14	Floor (grid 38-44)	67	2	NDA	Acceptable
15	Floor (grid 45-51)	76	11	NDA	Acceptable
16	Floor (grid 52-58)	76	11	NDA	Acceptable
BKG		65			

NDA = no detectable activity

If the sample wipe count is $\leq [Bkg + 4.66(Bkg)^{1/2}] \leq 103$ cpm, then the counts are 99.9998% from background rather than radioactivity.

All radiation level readings were ≤ 0.1 mR/hr (see attached floor plan)

Mid America Cardiology - Liberty
RESULTS OF WIPE TEST SURVEY
FOR DECOMMISSIONING OF STRESS TEST ROOM
 Performed by: Diagnostic Technology Consultants, Inc.
 Ed Crouch and Ruth Schukman-Dakotas
 Date of Survey: August 17, 2009

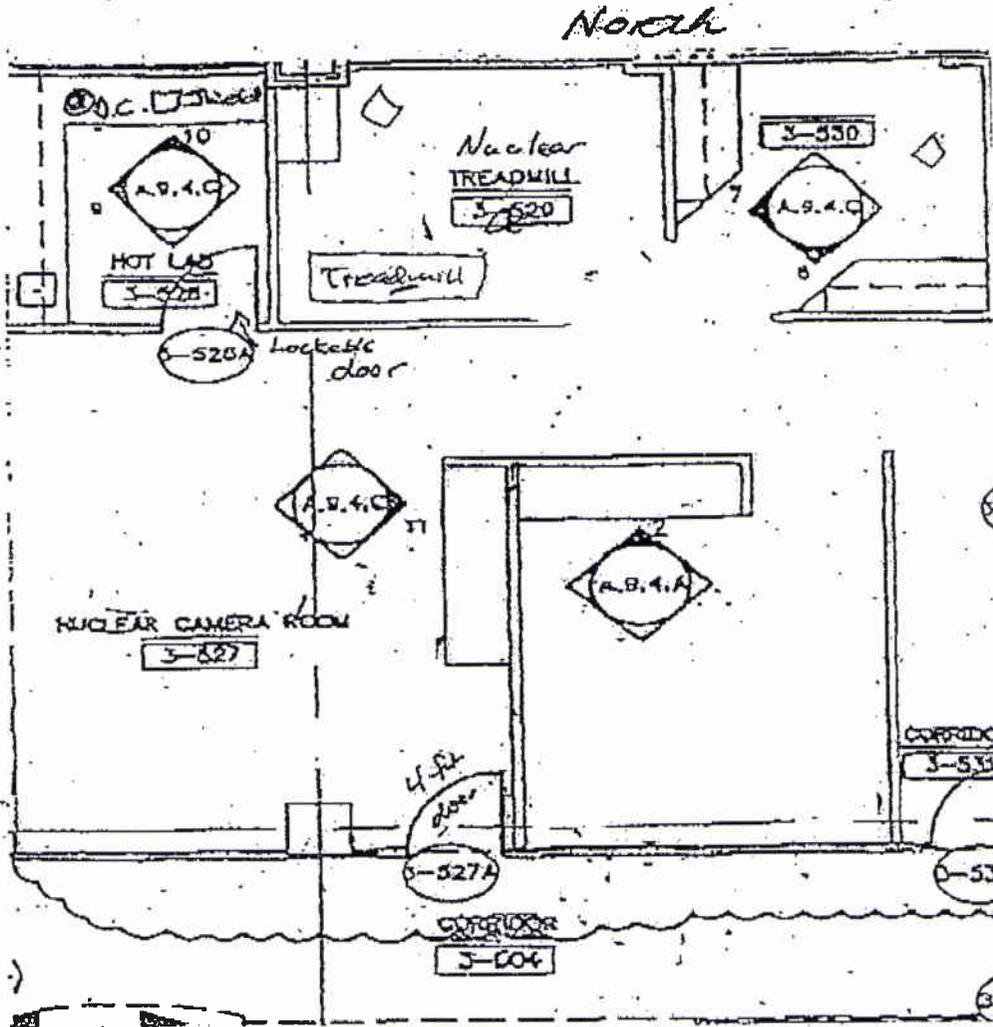
Wipe Number*	Area Wiped	Counts per minute (cpm)	Net cpm	Removed Activity (dpm)	Results
1	Floor (grid 0-20)	79	14	NDA	Acceptable
2	Floor (grid 21-40)	79	14	NDA	Acceptable
3	Floor (grid 41-60)	79	14	NDA	Acceptable
4	Floor (grid 61-80)	99	34	NDA	Acceptable
5	Floor (grid 81-100)	99	34	NDA	Acceptable
6	Floor (grid 101-120)	99	34	NDA	Acceptable
BKG		65			

NDA = no detectable activity

If the sample wipe count is $\leq [Bkg + 4.66(Bkg)^{1/2}] \leq 103$ cpm, then the counts are 99.9998% from background rather than radioactivity.

All radiation level readings were ≤ 0.1 mR/hr (see attached floor plan)

Mid America Cardiology
2521 Glenn Hendren, Suite 302
Liberty, Missouri

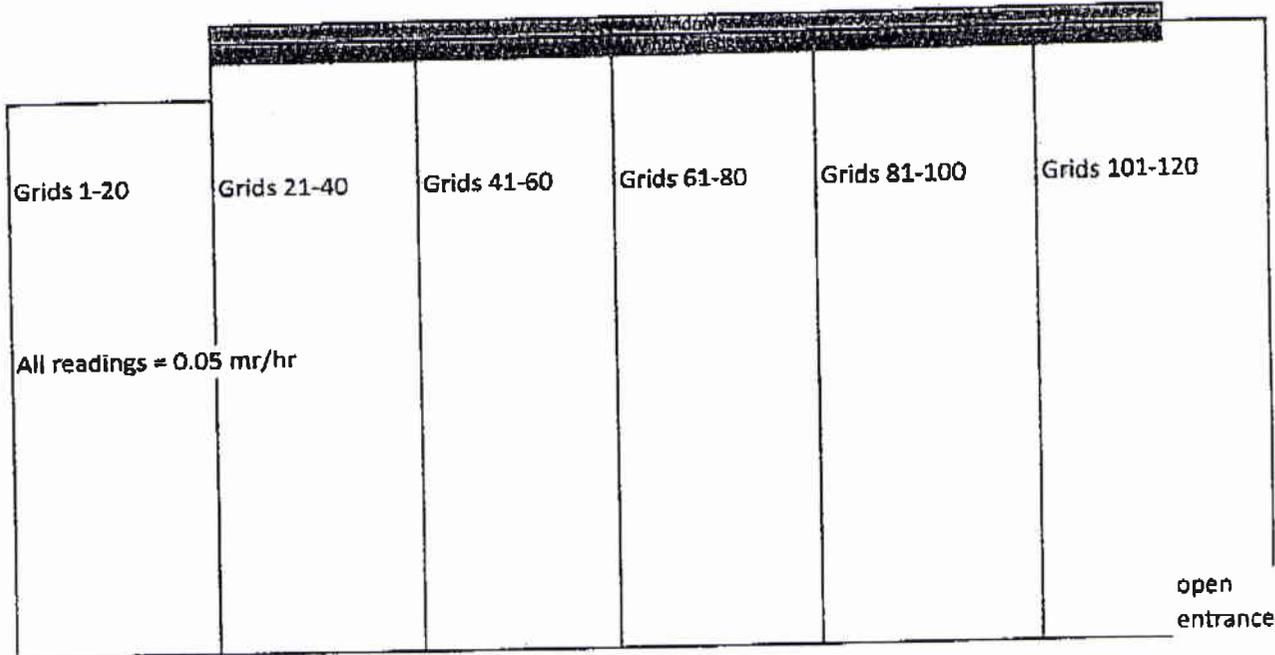


Mid America Cardiology - Liberty
Hot Lab 10'X8'

Drawer	Drawer	Drawer	
		9. Grids 1-9	
		10. Grids 10-16	0.05 mcf/hr
		11. Grids 17-23	
Drawer		12. Grids 24-30	0.05 mcf/hr
Drawer		13. Grids 31-37	0.05 mcf/hr
Drawer		14. Grids 38-44	
		15. Grids 45-51	
0.05 mcf/hr		16. Grids 52-58	

Door

**Mid America Cardiology - Liberty
Stress Room**



Analysis Equipment Parameters

Calibration and Constancy Assessment of the Picker Spectroscaler 4 (s/n: 20574) with Model 2804E Well Detector (s/n: 472)

Standard Source Information					Source data as of "Date"				Count Data			
Source	Half-life (Days)	Serial No.	Activity (μ Cl)	dpm	Calibration Date	Analysis Date	Elapsed Time(t) (days)	dpm as of "Analysis Date"	Source (5 min)	Bkg (5 min)	Efficiency (cpm/dpm)	MDA dpm
Ba-133	3836.15	1036-32-2	0.1056	234432	2/1/2004	1/2/2009	1797	169447	518267	377	0.612	7.0E+01
Co-57	271.74	1212-32-3	0.09933	220512.6	6/1/2007	1/2/2009	581	50112	164692	377	0.657	6.6E+01
Co-60	1925.28	NEN02118	0.121	268620	2/26/1980	1/13/2009	10549	6027	11920	414	0.396	1.1E+02
Cs-137	10975.55	962-51-9	0.09755	216561	3/1/2004	1/2/2009	1768	193686	229571	377	0.237	1.8E+02

Per standard operating procedures, constancy checks using a ^{137}Cs sealed source are conducted each day prior to using the equipment. To verify constancy, the cpm for the source must fall between 63,093 and 77,113. On 8/18/09, the cpm for the source was 67,740.

DEC. 4. 2009 12:49PM

MID AMERICA CARDIOLO

Printed: 4/28/2009

Nuclear Medicine Program Audit

Licensee: Mid-America Cardiology Associates, Inc.	License Number: 24-26254-01
Address: 2521 Glenn Hendren, Suite 302 Liberty, MO 64068	Expiration: 07/31/11

SEALED SOURCE LEAK TEST CERTIFICATE

04/27/09

LEAK TEST REQUIRED	Source	Serial Number	Manufacturer	Model	Wipe Count (5 min)	Bkg Count (5 min)	Wipe Activity (uCi)	Acceptable 35.67(e)
X	Cs-137	S356040-024	Dupont	NES 366	356	375	NDA	YES
X	Co-57	BM011509014104	RadQual	BM01-15	382	375	NDA	YES
	Co-57	744-49-125	IPL	RV-057				
	Co-57	S206115-060	Dupont	NES 206				
	Co-57	S206107-035	Dupont	NES 206				
	Co-57	S206085-076	Dupont	NES 206				
	Co-57	3084/230	CIS	CO57-EGAG90				

Leak Test Performed By:	Joel McAllister, CHP	Background Count:	375
Leak Test Performed On:	04/27/09	Delta1 (net counts):	46
Leak Test Samples Counted By:	Teresa Stika	Delta2 (net counts):	93
Leak Test Samples Counted On:	04/28/09	Decision Limit (L _d):	420

Method: Each leak test sample was collected by wiping an alcohol pad over the exposed surface of the source.
 No Detectable Activity (NDA): Wipe count equal to or less than the Decision Limit $(Bkg + 2.33 \cdot \sqrt{Bkg})$

Instrument: Picker Spectroscaler 4 (s/n: 20574) with Model 2804E Well Detector (s/n: 472)

Standard Source Information				Count Data				
Source	Serial No.	Activity (uCi)	Calibration Date	Date	Source (5 min)	Bkg (5 min)	Efficiency (c/d)	MDA (uCi)
Ba-133	1036-32-2	0.1058	02/01/04	04/07/09	509875	400	0.612	3.9E-05
Co-57	1212-32-3	0.09933	06/01/07	04/07/09	126360	400	0.651	3.1E-05
Co-60	NEN02118	0.121	02/26/80	01/13/09	11920	414	0.362	5.3E-05
Cs-137	962-51-9	0.09755	03/01/04	04/07/09	225614	400	0.234	8.5E-05

Test Date: 04/27/09	Regulation: 10 CFR 35.67(b)
Results: PASS	Frequency: Semi-Annual
Next Test Due: 10/27/09	Recordkeeping: 3 years

Joel McAllister, DABR, CHP Health Physicist Date: 4/28/09
 Thomas Rosamond, MID, RSO Date: [Signature]

