

MID-AMERICA CARDIOLOGY ASSOCIATES, INC.

Hubert H. Bell, M.D., Emeritus
Lynn H Kindred, M.D.
Gary D. Beauchamp, M.D.
James J. Harbrecht, M.D.
Loren D. Berenborn, M.D.
Charles B. Porter, M.D.
Edward J. Laughlin, M.D.
Douglas J. Willhoite, M.D.
Steven D. Owens, M.D.
Thomas L. Rosamond, M.D.
James L. Vacek, M.D.
Randall E. Genton, M.D.
Dak R. Burnett, M.D.
Martin P. Emert, M.D.

1530 N. Church Road
LIBERTY, MISSOURI 64068
913-945-6300
FAX 913-945-6350

KANSAS UNIVERSITY SCHOOL OF MEDICINE
Division of Cardiovascular Diseases
Steven B. Gollub, M.D.
David G. Meyers, M.D.
David B. Wilson, M.D.

Peter N. Tadros, M.D.
Kevin M. Mulhern, M.D.
S. Roy Hegde, M.D.
Robert L. Herman, M.D.
Steven P. Freeman, D.O.
Dennis R. Bresnahan, M.D.
Rhea C. Pimentel, M.D.
Robert C. Candipan, M.D.
Brian C. Weiford, M.D.
Marina N. Hannen, M.D.

October 5, 2017

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

Notification RE: Byproduct Materials License Number 24-26254-01

Control Number: 600844.

Dear Sir or Madam:

The following is the additional information requested:

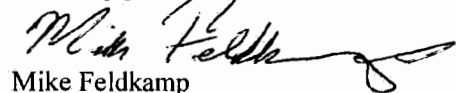
- 1) Efficiency of the well counter (Capintec, Caprac-t, serial number 10067):
See Attachment: Decommission Report (On page 3 of 7).
- 2) List of sealed sources used at the location of use and the most recent leak test results for each source.
See Attachment: MAC Tremont Source Leak Tests.
- 3) Indicate the disposition of each source, and receipt acknowledgement letter (from the recipient licensee Radiation Safety Officer) for each source transferred to another authorized recipient, confirming such receipt, if applicable: Sources were moved to our main address:

1530 N. Church Road
Liberty, Missouri 64068

- 4) Calibration date for the survey meter, Ludlum, Model 3, serial number 26027):
3/22/2017

If you have any other questions, please contact me at 913-588-9669 or mfeldkamp@kumc.edu.

Sincerely yours,



Mike Feldkamp
Nuclear Cardiology Director
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)

**REPORT
DECOMMISSIONING OF NUCLEAR MEDICINE AREA**

Date: **08/29/17**

Location of Decommissioning: **Mid-America Cardiology Associates, Inc.
5501 NW 62nd Terrace, Suite 201
Kansas City, MO 64152**

Rooms Decommissioned: **Hot Lab, Camera Room, Stress Lab**

Management Representative: **Tracy Rasmussen, Mid-America Cardiology**

Radiation Safety Officer: **Thomas Rosamond, M.D.**

Chair Radiation Safety Comm: **KUHA**

Nuclear Medicine Technologist: **KUHA**

RADIOACTIVE MATERIALS LICENSES

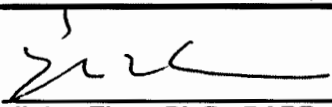
Nuclear Regulatory Commission
Region III

License Number: **24-26254-01**
Amendment Number: **18**
Expiration Date: **01/31/22**

DECOMMISSIONING RESULTS

- 1 No radioactive materials were stored in the area decommissioned at time of the demommissioning.
- 2 The imaging systems, stress system and all removable objects were removed from the rooms.
- 2 No radioactive materials or sources were found during the decommissioning survey.
- 3 The ambient exposure rate survey was acceptable.
- 4 The removable contamination survey was acceptable.

Medical Physics Consultant:


Jiping Zhan, Ph.D., DABR, NMP
Diagnostic Technology Consultants, Inc.
5930 Roe Avenue
Mission, Kansas 66205

8/30/2017

Date

(913) 236-6000
(913) 236-6655 FAX

Radiation Safety Officer:

Thomas Rosamond, M.D.

Date

Licensee: Mid-America Cardiology Associates, Inc.
Address: 5501 NW 62nd Terrace, Suite 201
Kansas City, MO 64152

License Number: 24-26254-01
Expiration: 01/31/22

Decommission Data
08/29/17

Historical Use:

The area for decommissioning consists of the nuclear medicine cardiac Imaging clinic consisting of the Hot Lab, Camera Room, and Stress Lab.

Sealed Sources were stored in the Hot Lab. Patient doses were also stored in the hot lab. The radioactive material used in the stress room consisted of Thallium-201 for stress imaging.

The radioactive materials used in the camera/imaging area consisted of a cobalt-57 sealed source for camera QC. Thallium-201 was used for clinical imaging.

All radioactive waste from dose administration was stored in the hot lab.

Equipment and Device Removal:

The rooms were cleared of all equipment, desks, chairs, wall canisters and items that were not permanently fixed in their location.

Wipe Survey Procedure:

Each wipe test sample was collected by wiping an alcohol pad over the surface over an area identified on the diagrams. The wipe sample was secured in the alcohol packet and appropriately identified with the location of the wipe. The wipe samples were then taken to the Diagnostic Technology Consultants, Inc. office for measurement. The wipe samples were placed into the well counter after all required quality control and test measurements were completed. The results of the wipe surveys were then entered into the spread sheet tables in cpm. The dpm was calculated based on the most recent quarterly efficiency testing.

Wipe Test Results Evaluation:

No Detectable Activity (NDA) means the wipe count was equal to or less than the Decision Limit $[BKG + 2.33 \cdot \sqrt{BKG}]$

Area Survey Procedure:

The survey meter pancake probe was passed in a sweeping motion over each area identified on the diagrams. The probe to surface distance was maintained at a minimum distance of less than 3.0 cm. The background level was established by taking a series of area survey readings in the hallway adjacent to the rooms being surveyed. The background survey readings were determined to be 0.03 mR/hr.

Area Survey Results and Trigger Level:

The action level was based on any area survey reading exceeding background levels.

Licensee: Mid-America Cardiology Associates, Inc.
 Address: 5501 NW 62nd Terrace, Suite 201
 Kansas City, MO 64152

License Number: 24-26254-01
 Expiration: 01/31/22

Survey and Analysis Equipment Parameters

08/29/17

All Equipment used for surveyers are the property of Diagnostic Technology Consultants, Inc.

Well Counter

Manufacturer: Capintec
 Model: Caprac-t
 Serial Number: 10067

Standard Source Information							
Source	Serial No.	Activity (uCi)	Calibration Date	Half-life (Days)	Decay Time (t) (Days)	A(t) (uCi)	A(t) (dpm)
Co-57	1848-51-4	1.08E-01	10/01/16	271.74	258	5.60E-02	1.24E+05
Ba-133	1036-32-2	1.06E-01	02/01/04	3836.15	4884	4.37E-02	9.70E+04
Co-60	NEN100S	1.21E-01	02/26/80	1925.28	13625	8.97E-04	1.99E+03
Cs-137	962-51-9	9.76E-02	03/01/04	10975.55	4855	7.18E-02	1.59E+05

Minimum Detectable Activity (MDA)					
Analysis Date	Source Count (5 min)	Bkg (5 min)	Efficiency	MDA (dpm)	MDA (uCi)
06/16/17	454450	865	0.935	68	3.08E-05
06/16/17	578800	865	0.929	69	3.10E-05
06/16/17	4850	865	0.400	160	7.19E-05
06/16/17	238610	865	0.298	214	9.64E-05

Survey Meter

Manufacturer: Ludlum
 Model: Model 3
 Serial Number: 26027

Probe:

Manufacturer: Ludlum
 Model: 44-9 (pancake)
 Serial Number: 097834

Per standard operating procedures, constancy checks using a ¹³⁷Cs sealed source are conducted each day prior to using the equipment. To verify constancy, the measured activity must fall within 20% of the calculated standard activity.

Correction Factors as of March 22, 2017.


Scale Multiplier	Distance (cm)	Calculated mr/hr	Measured (mr/hr)	Correction Factor
100	111.9	150	120	Do not Use
100	193.8	50	80	Do not Use
10	250.9	15	14	1.07
10	304.6	5	5	1.00
1	118.8	1.5	1.4	1.07
1	205.8	0.5	0.5	1.00
0.1	114.0	0.15	0.15	1.00
0.1	197.4	0.05	0.05	1.00

Calibrated by Mid-America Calibrations, Inc. 808 SW Nautica Court, Lee's Summit, Missouri 64082, NRC License No. 24-32531-01, with a J.L. Shepherd Model 28-6a calibrator, serial #10018, 1.2 Ci Cs-137, 3M 4F6H, source serial #2824 or a Ludlum Model 500-2 Pulser, serial #127533. The output is traceable to the NBS (N.I.S.T.) and all instruments are calibrated in accordance with MIL-STD 45662A and ANSI N323-1978.

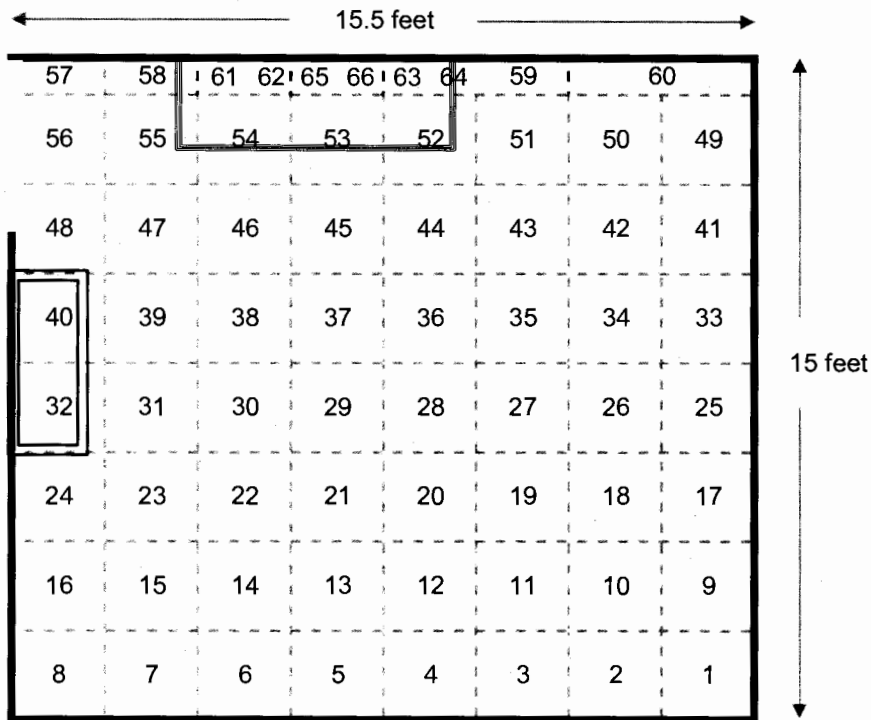
Licensee: Mid-America Cardiology Associates, Inc.
Address: 5501 NW 62nd Terrace, Suite 201
Kansas City, MO 64152

License Number: 24-26254-01
Expiration: 01/31/22

Room Diagram and Area Identification
08/29/17

 = 1x1 foot

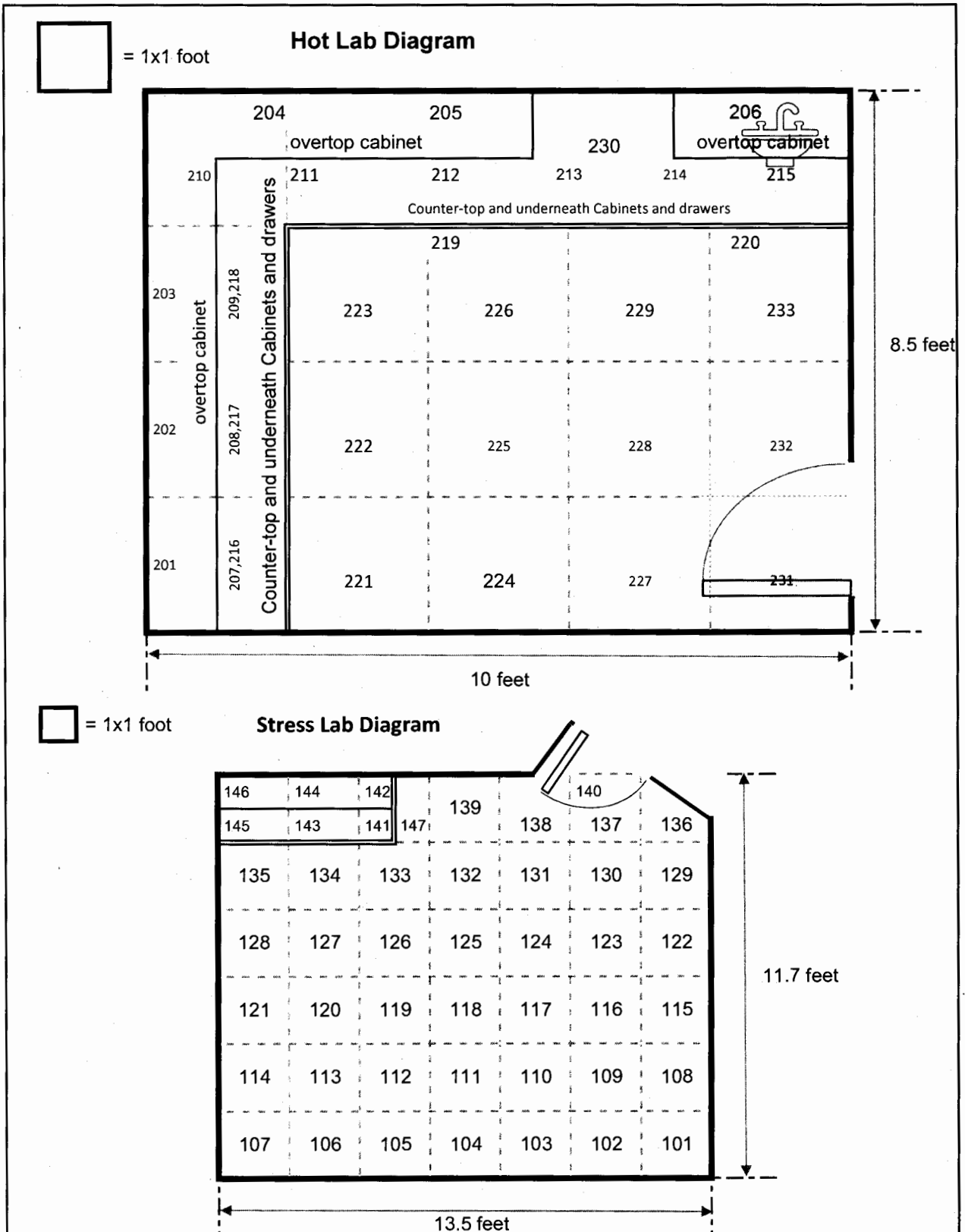
Camera Room Diagram



Licensee: Mid-America Cardiology Associates, Inc.
 Address: 5501 NW 62nd Terrace, Suite 201
 Kansas City, MO 64152

License Number: 24-26254-01
 Expiration: 01/31/22

Additional Wipe and Survey Locations 08/29/17



Licensee: Mid-America Cardiology Associates, Inc.
 Address: 5501 NW 62nd Terrace, Suite 201
 Kansas City, MO 64152

License Number: 24-26254-01
 Expiration: 01/31/22

RADIATION SURVEY - Page 1 of 2

08/29/17

SURVEY				Radiation Survey			Results
No.	Room	Location	Area	Ambient (mR/hr)	Wipe (cpm)	Wipe (dpm)	
		Background		0.03	192		
1	Cam Rm	Floor	Restricted	0.03	192	NDA	PASS
2	Cam Rm	Floor	Restricted	0.03	174	NDA	PASS
3	Cam Rm	Floor	Restricted	0.03	180	NDA	PASS
4	Cam Rm	Floor	Restricted	0.03	174	NDA	PASS
5	Cam Rm	Floor	Restricted	0.03	175	NDA	PASS
6	Cam Rm	Floor	Restricted	0.03	175	NDA	PASS
7	Cam Rm	Floor	Restricted	0.03	174	NDA	PASS
8	Cam Rm	Floor	Restricted	0.03	174	NDA	PASS
9	Cam Rm	Floor	Restricted	0.03	180	NDA	PASS
10	Cam Rm	Floor	Restricted	0.03	197	NDA	PASS
11	Cam Rm	Floor	Restricted	0.03	192	NDA	PASS
12	Cam Rm	Floor	Restricted	0.03	197	NDA	PASS
13	Cam Rm	Floor	Restricted	0.03	179	NDA	PASS
14	Cam Rm	Floor	Restricted	0.03	174	NDA	PASS
15	Cam Rm	Floor	Restricted	0.03	179	NDA	PASS
16	Cam Rm	Floor	Restricted	0.03	175	NDA	PASS
17	Cam Rm	Floor	Restricted	0.03	180	NDA	PASS
18	Cam Rm	Floor	Restricted	0.03	180	NDA	PASS
19	Cam Rm	Floor	Restricted	0.03	197	NDA	PASS
20	Cam Rm	Floor	Restricted	0.03	187	NDA	PASS
21	Cam Rm	Floor	Restricted	0.03	189	NDA	PASS
22	Cam Rm	Floor	Restricted	0.03	180	NDA	PASS
23	Cam Rm	Floor	Restricted	0.03	187	NDA	PASS
24	Cam Rm	Floor	Restricted	0.03	187	NDA	PASS
25	Cam Rm	Cabinet Shelf	Restricted	0.03	168	NDA	PASS
26	Cam Rm	Floor	Restricted	0.03	175	NDA	PASS
27	Cam Rm	Floor	Restricted	0.03	206	NDA	PASS
28	Cam Rm	Floor	Restricted	0.03	175	NDA	PASS
29	Cam Rm	Floor	Restricted	0.03	180	NDA	PASS
30	Cam Rm	Floor	Restricted	0.03	192	NDA	PASS
31	Cam Rm	Floor	Restricted	0.03	179	NDA	PASS
32	Cam Rm	Floor	Restricted	0.03	174	NDA	PASS
33	Cam Rm	Cabinet Shelf	Restricted	0.03	189	NDA	PASS
34	Cam Rm	Floor	Restricted	0.03	200	NDA	PASS
35	Cam Rm	Floor	Restricted	0.03	168	NDA	PASS
36	Cam Rm	Floor	Restricted	0.03	200	NDA	PASS
37	Cam Rm	Floor	Restricted	0.03	189	NDA	PASS
38	Cam Rm	Floor	Restricted	0.03	200	NDA	PASS
39	Cam Rm	Floor	Restricted	0.03	182	NDA	PASS
40	Cam Rm	Floor	Restricted	0.03	203	NDA	PASS
41	Cam Rm	Floor	Restricted	0.03	191	NDA	PASS
42	Cam Rm	Floor	Restricted	0.03	206	NDA	PASS
43	Cam Rm	Floor	Restricted	0.03	175	NDA	PASS
44	Cam Rm	Floor	Restricted	0.03	193	NDA	PASS
45	Cam Rm	Floor	Restricted	0.03	166	NDA	PASS

Cam Rm = Camera Room, Str Rm = Stress Room

SURVEY				Radiation Survey			Results
No.	Room	Location	Area	Ambient (mR/hr)	Wipe (cpm)	Wipe (dpm)	
		Background		0.03	192		
46	Cam Rm	Floor	Restricted	0.03	153	NDA	PASS
47	Cam Rm	Floor	Restricted	0.03	206	NDA	PASS
48	Cam Rm	Floor	Restricted	0.03	153	NDA	PASS
49	Cam Rm	Floor	Restricted	0.03	153	NDA	PASS
50	Cam Rm	Floor	Restricted	0.03	168	NDA	PASS
51	Cam Rm	Floor	Restricted	0.03	191	NDA	PASS
52	Cam Rm	Floor	Restricted	0.03	206	NDA	PASS
53	Cam Rm	Floor	Restricted	0.03	191	NDA	PASS
54	Cam Rm	Floor	Restricted	0.03	193	NDA	PASS
55	Cam Rm	Floor	Restricted	0.03	182	NDA	PASS
56	Cam Rm	Floor	Restricted	0.03	206	NDA	PASS
57	Cam Rm	Floor	Restricted	0.03	193	NDA	PASS
58	Cam Rm	Floor	Restricted	0.03	203	NDA	PASS
59	Cam Rm	Floor	Restricted	0.03	206	NDA	PASS
60	Cam Rm	Floor	Restricted	0.03	169	NDA	PASS
61	Cam Rm	Desk Top	Restricted	0.03	166	NDA	PASS
62	Cam Rm	Drawers	Restricted	0.03	166	NDA	PASS
63	Cam Rm	Desk Top	Restricted	0.03	203	NDA	PASS
64	Cam Rm	Drawers	Restricted	0.03	169	NDA	PASS
65	Cam Rm	Desk Top	Restricted	0.03	182	NDA	PASS
66	Cam Rm	Floor	Restricted	0.03	169	NDA	PASS
101	Str Rm	Floor	Restricted	0.03	200	NDA	PASS
102	Str Rm	Floor	Restricted	0.03	200	NDA	PASS
103	Str Rm	Floor	Restricted	0.03	195	NDA	PASS
104	Str Rm	Floor	Restricted	0.03	183	NDA	PASS
105	Str Rm	Floor	Restricted	0.03	171	NDA	PASS
106	Str Rm	Floor	Restricted	0.03	165	NDA	PASS
107	Str Rm	Floor	Restricted	0.03	186	NDA	PASS
108	Str Rm	Floor	Restricted	0.03	200	NDA	PASS
109	Str Rm	Floor	Restricted	0.03	193	NDA	PASS
110	Str Rm	Floor	Restricted	0.03	186	NDA	PASS
111	Str Rm	Floor	Restricted	0.03	183	NDA	PASS
112	Str Rm	Floor	Restricted	0.03	186	NDA	PASS
113	Str Rm	Floor	Restricted	0.03	186	NDA	PASS
114	Str Rm	Floor	Restricted	0.03	171	NDA	PASS
115	Str Rm	Floor	Restricted	0.03	193	NDA	PASS
116	Str Rm	Floor	Restricted	0.03	171	NDA	PASS
117	Str Rm	Floor	Restricted	0.03	171	NDA	PASS
118	Str Rm	Floor	Restricted	0.03	200	NDA	PASS
119	Str Rm	Floor	Restricted	0.03	195	NDA	PASS
120	Str Rm	Floor	Restricted	0.03	200	NDA	PASS
121	Str Rm	Floor	Restricted	0.03	205	NDA	PASS
122	Str Rm	Floor	Restricted	0.03	176	NDA	PASS
123	Str Rm	Floor	Restricted	0.03	186	NDA	PASS
124	Str Rm	Floor	Restricted	0.03	171	NDA	PASS

Survey Performed By: Jiping Zhan, Ph.D. DABR, NMP
 Survey Performed On: 08/29/17
 Wipe Test Samples Counted By: Jiping Zhan, Ph.D. DABR, NMP
 Wipe Test Samples Counted On: 08/29/17

Background Count: 192
 Delta1 (net counts): 32
 Delta2 (net counts): 67
 Decision Limit (L_c): 259

Licensee: Mid-America Cardiology Associates, Inc.
 Address: 5501 NW 62nd Terrace, Suite 201
 Kansas City, MO 64152

License Number: 24-26254-01
 Expiration: 01/31/22

RADIATION SURVEY - Page 2 of 2

08/29/17

SURVEY				Radiation Survey			Results
No.	Room	Location	Area	Ambient (mR/hr)	Wipe (cpm)	Wipe (dpm)	
		Background		0.03	192		
125	Str Rm	Floor	Restricted	0.03	180	NDA	PASS
126	Str Rm	Floor	Restricted	0.03	193	NDA	PASS
127	Str Rm	Floor	Restricted	0.03	171	NDA	PASS
128	Str Rm	Floor	Restricted	0.03	178	NDA	PASS
129	Str Rm	Floor	Restricted	0.03	176	NDA	PASS
130	Str Rm	Floor	Restricted	0.03	180	NDA	PASS
131	Str Rm	Floor	Restricted	0.03	200	NDA	PASS
132	Str Rm	Floor	Restricted	0.03	205	NDA	PASS
133	Str Rm	Floor	Restricted	0.03	183	NDA	PASS
134	Str Rm	Floor	Restricted	0.03	180	NDA	PASS
135	Str Rm	Floor	Restricted	0.03	171	NDA	PASS
136	Str Rm	Floor	Restricted	0.03	176	NDA	PASS
137	Str Rm	Floor	Restricted	0.03	178	NDA	PASS
138	Str Rm	Floor	Restricted	0.03	186	NDA	PASS
139	Str Rm	Floor	Restricted	0.03	200	NDA	PASS
140	Str Rm	Floor	Restricted	0.03	200	NDA	PASS
141	Str Rm	Desk Top	Restricted	0.03	171	NDA	PASS
142	Str Rm	Cabinet	Restricted	0.03	205	NDA	PASS
143	Str Rm	Desk Top	Restricted	0.03	165	NDA	PASS
144	Str Rm	Cabinet	Restricted	0.03	171	NDA	PASS
145	Str Rm	Desk Top	Restricted	0.03	200	NDA	PASS
146	Str Rm	Drawers	Restricted	0.03	165	NDA	PASS
147	Str Rm	Floor	Restricted	0.03	178	NDA	PASS
201	Hot Lb	Cabinet Shieff	Restricted	0.03	176	NDA	PASS
202	Hot Lb	Cabinet Shieff	Restricted	0.03	179	NDA	PASS
203	Hot Lb	Cabinet Shieff	Restricted	0.03	172	NDA	PASS
204	Hot Lb	Cabinet Shieff	Restricted	0.03	172	NDA	PASS
205	Hot Lb	Cabinet Shieff	Restricted	0.03	176	NDA	PASS
206	Hot Lb	Cabinet Shieff	Restricted	0.03	154	NDA	PASS
207	Hot Lb	Counter Top	Restricted	0.03	171	NDA	PASS
208	Hot Lb	Counter Top	Restricted	0.03	195	NDA	PASS
209	Hot Lb	Counter Top	Restricted	0.03	176	NDA	PASS
210	Hot Lb	Counter Top	Restricted	0.03	179	NDA	PASS
211	Hot Lb	Counter Top	Restricted	0.03	154	NDA	PASS
212	Hot Lb	Counter Top	Restricted	0.03	180	NDA	PASS
213	Hot Lb	Counter Top	Restricted	0.03	171	NDA	PASS
214	Hot Lb	Counter Top	Restricted	0.03	194	NDA	PASS
215	Hot Lb	Sink	Restricted	0.03	171	NDA	PASS
216	Hot Lb	Drawers	Restricted	0.03	180	NDA	PASS
217	Hot Lb	Drawers	Restricted	0.03	171	NDA	PASS
218	Hot Lb	Drawers	Restricted	0.03	186	NDA	PASS
219	Hot Lb	Drawers	Restricted	0.03	194	NDA	PASS
220	Hot Lb	Cabinet	Restricted	0.03	169	NDA	PASS
221	Hot Lb	Floor	Restricted	0.03	169	NDA	PASS
222	Hot Lb	Floor	Restricted	0.03	171	NDA	PASS

Str Rm = Stress Room, Hot Lb = Hot Lab.

SURVEY				Radiation Survey			Results
No.	Room	Location	Area	Ambient (mR/hr)	Wipe (cpm)	Wipe (dpm)	
		Background		0.03	192		
223	Hot Lb	Floor	Restricted	0.03	194	NDA	PASS
224	Hot Lb	Floor	Restricted	0.03	195	NDA	PASS
225	Hot Lb	Floor	Restricted	0.03	172	NDA	PASS
226	Hot Lb	Floor	Restricted	0.03	195	NDA	PASS
227	Hot Lb	Floor	Restricted	0.03	169	NDA	PASS
228	Hot Lb	Floor	Restricted	0.03	186	NDA	PASS
229	Hot Lb	Floor	Restricted	0.03	186	NDA	PASS
230	Hot Lb	Floor	Restricted	0.03	180	NDA	PASS
231	Hot Lb	Floor	Restricted	0.03	171	NDA	PASS
232	Hot Lb	Floor	Restricted	0.03	154	NDA	PASS
233	Hot Lb	Floor	Restricted	0.03	179	NDA	PASS

Survey Performed By:	Jiping Zhan, Ph.D. DABR, NMP	Background Count:	192
Survey Performed On:	08/29/17	Delta1 (net counts):	32
Wipe Test Samples Counted By:	Jiping Zhan, Ph.D. DABR, NMP	Delta2 (net counts):	67
Wipe Test Samples Counted On:	08/29/17	Decision Limit (L _c):	259

Licensee: Mid-America Cardiology Associates, Inc.
 Address: 5501 NW 62nd Terrace, Suite 201
 Kansas City, MO 64152

License Number: 24-26254-01
 Expiration: 01/31/22

SEALED SOURCE LEAK TEST CERTIFICATE

04/05/17

LEAK TEST REQUIRED	Source	Serial Number	Manufacturer	Model	Wipe Count (5 min)	Bkg Count (5 min)	Wipe Activity (uCi)	Acceptable 35.67(e)
35.67(f)								
X	Cs-137	534/4659	CIS	CS137-EGAG50	870	875	NDA	YES
X	Co-57	BM01L1516112104	Rad Qual	BM01L-15	875	875	NDA	YES


Leak Test Performed By:	Jiping Zhan	Background Count:	875
Leak Test Performed On:	04/05/17	Delta1 (net counts):	69
Leak Test Samples Counted By:	Jiping Zhan	Delta2 (net counts):	140
Leak Test Samples Counted On:	04/05/17	Decision Limit (L_c):	1015

Serial No. 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 [$Bkg + 4.66 \cdot \sqrt{Bkg}$]]

Instrument: Capintec Caprac-t, S/N: 10067

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	0.1056	02/01/04	03/20/17	461255	1275	0.933	1.7E-05
Co-57	1848-51-4	0.1082	10/01/16	03/20/17	723810	1275	0.928	1.7E-05
Co-60	NEN02118	0.121	02/26/80	03/20/17	5425	1275	0.404	4.0E-05
Cs-137	962-51-9	0.09755	03/01/04	03/20/17	241015	1275	0.299	5.4E-05

Test Date: 04/05/17	Regulation: 10 CFR 35.67(b)
Results: PASS	Frequency: Semi-Annual
Next Test Due: 10/03/17	Recordkeeping: 3 years


 Jiping Zhan, Ph.D, DABR, NMP

7/17/2017
 Date

Thomas Rosamond, M.D. RSO

Date

Licensee: Mid-America Cardiology Associates, Inc.	License Number: 24-26254-01
Address: 5501 NW 62nd Terrace, Suite 201 Kansas City, MO 64152	Expiration: 01/31/22

SEALED SOURCE LEAK TEST CERTIFICATE

10/04/17

LEAK TEST REQUIRED	Source	Serial Number	Manufacturer	Model	Wipe Count (5 min)	Bkg Count (5 min)	Wipe Activity (uCi)	Acceptable 35.67(f)
X	Cs-137	534/4659	CIS	CS137-EGAG50	920	870	NDA	YES
X	Co-57	BM01L1516112104	Rad Qual	BM01L-15	925	870	NDA	YES

Above sources have been moved to:

Mid-America Cardiology Associates, Inc. - Liberty Office
1530 N. Church Road
Liberty, MO 64068


Leak Test Performed By:	Jiping Zhan	Background Count:	870
Leak Test Performed On:	10/04/17	Delta1 (net counts):	69
Leak Test Samples Counted By:	Jiping Zhan	Delta2 (net counts):	140
Leak Test Samples Counted On:	10/04/17	Decision Limit (L _c):	1010

Serial No. 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 + 4.66*SQRT(Bkg)]

Instrument: Capintec Caprac-t, S/N: 10067

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	0.1056	02/01/04	09/19/17	446885	850	0.935	1.4E-05
Co-57	1848-51-4	0.1082	10/01/16	09/19/17	454865	850	0.930	1.4E-05
Co-60	NEN02118	0.121	02/26/80	09/19/17	4715	850	0.402	3.3E-05
Cs-137	962-51-9	0.09755	03/01/04	09/19/17	237365	850	0.299	4.5E-05

Test Date: 10/04/17	Regulation: 10 CFR 35.67(b)
Results: PASS	Frequency: Semi-Annual
Next Test Due: 04/03/18	Recordkeeping: 3 years


Jiping Zhan, Ph.D, DABR, NMP

10/5/2017
Date

Thomas Rosamond, M.D. RSO

Date

Gryglak, Magdalena

From: Mike Feldkamp <mfeldkamp@kumc.edu>
Sent: Friday, October 06, 2017 1:39 PM
To: Gryglak, Magdalena
Subject: [External_Sender] RE_ Control# 600844
Attachments: 10062017Signed Followup.pdf; Decommission Report.pdf; MAC Tremont Source Leak Tests.pdf