

**LANSING CARDIOVASCULAR INSTITUTE, INC**  
**JWALA PRASAD, MD**  
**5848 EXECUTIVE DRIVE**  
**LANSING, MI 48911**  
**PH: 517-882-8222 FAX: 517-882-5345**

**September 26, 2016**

United States Nuclear Regulatory Commission  
Region III, Material Licensing  
2443 Warrenville Road, Suite 210  
Lisle, IL 60532-4352

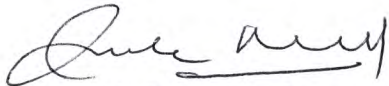
**REG: Termination of NRC License No. 21-26498-01,  
Lansing Cardiovascular Institute, Inc**

Dear Sir/Madam,

We are requesting the termination of our NRC License # 21-26498-01. We are no longer providing nuclear medicine services. As required; we are enclosing NRC Form 314, the most recent sealed source Leak test, the close out survey results, diagram of the service area and the confirmation receipt from Chase Environmental Group for the disposal of the radioactive sources.

If you have any questions or concerns, please contact our medical physics consultant, Sharon Updyke, MPH at 517-795-8786.

Sincerely,



Jwala Prasad, MD  
Executive Management  
Lansing Cardiovascular Institute, Inc.

RECEIVED SEP 30 2016



## CERTIFICATE OF DISPOSITION OF MATERIALS

Estimated burden per response to comply with this mandatory collection request: 30 minutes. This submittal is used by NRC as part of the basis for its determination that the facility is released for unrestricted use. Send comments regarding burden estimate to the FOIA, Privacy, and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOF-10202, (3150-0028), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE NAME AND ADDRESS

Lansing Cardiovascular Institute, Inc.  
5848 Executive Drive  
Lansing, MI 48911

LICENSE NUMBER

21-26298-01

DOCKET NUMBER

030-33183

LICENSE EXPIRATION DATE

September 30, 2023

**A. LICENSE STATUS (Check the appropriate box)**

- ☐ This license has expired. ☒ This license has not yet expired; please terminate it.

**B. DISPOSAL OF RADIOACTIVE MATERIAL**

(Check the appropriate boxes and complete as necessary. If additional space is needed, provide attachments)

The licensee, or any individual executing this certificate on behalf of the licensee, certifies that:

- ☐ 1. No radioactive materials have ever been procured or possessed by the licensee under this license.  
☒ 2. All activities authorized by this license have ceased, and all radioactive materials procured and/or possessed by the licensee under this license number cited above have been disposed of in the following manner:  
☐ a. Transfer of radioactive materials to the licensee listed below:

☐ b. Disposal of radioactive materials:

☐ 1. Directly by the licensee:

☐ 2. By licensed disposal site:

☒ 3. By waste contractor:

All radioactive sources and waste were transferred for disposal on August 4, 2016 by Chase Environmental Group, Inc., 11450 Watterson Court, Louisville, KY 40299

☐ c. All radioactive materials have been removed such that any remaining residual radioactivity is within the limits of 10 CFR Part 20, Subpart E, and is ALARA.

**C. SURVEYS PERFORMED AND REPORTED**

- ☒ 1. A radiation survey was conducted by the licensee. The survey confirms:  
☒ a. the absence of licensed radioactive materials  
☐ b. that any remaining residual radioactivity is within the limits of 10 CFR 20, Subpart E, and is ALARA.  
☒ 2. A copy of the radiation survey results:  
☒ a. is attached; or ☐ b. is not attached (Provide explanation); or ☐ c. was forwarded to NRC on: \_\_\_\_\_ Date  
☐ 3. A radiation survey is not required as only sealed sources were ever possessed under this license, and  
☐ a. The results of the latest leak test are attached; and/or ☐ b. No leaking sources have ever been identified.

The person to be contacted regarding the information provided on this form:

NAME	TITLE	TELEPHONE (Include Area Code)	E-MAIL ADDRESS
Jwala Prasad, M.D.	Executive Managment	517-410-7878	prasadj@aol.com

Mail all future correspondence regarding this license to:

JWALA PRASAD, MD ; 3705 FAIRHILLS DRIVE, OKEMOS, MI 48864.

**C. CERTIFYING OFFICIAL**

I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT

PRINTED NAME AND TITLE	SIGNATURE	DATE
Jwala Prasad, M.D.		SEPT 26, 2016

WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECT. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.



## Sealed Source Leak Test

Licensee: Lansing Cardiovascular Institute, Inc.

Date: 03/17/16

Performed by: Sharon Updike

Nuclide	Type	Calibration Activity	Calibration Date	Location	M/N	S/N
Cs-137	Vial	212 uCi	01/18/93	Hot Lab	NES-356	S356024027
Current Activity: 124.1 uCi						
Ba-133	Vial	290 uCi	08/10/92	Hot Lab	NES-358	S358013039
Current Activity: 61.26 uCi						
Cs-137	Vial	205.4 uCi	04/01/05	Hot Lab		1111-2-10
Current Activity: 159.4 uCi						
Ba-133	Vial	273.5 uCi	05/01/05	Hot Lab		1111-59-4
Current Activity: 133.6 uCi						

Comment: The sources listed above were leak tested using a dry wipe technique and were found to have less than 0.005 uCi removable activity. The following Minimum Detectable Activities are based upon a background at the indicated value. Background was at or below these levels when the above tests were completed.

Well Counter: Captus 3000

Nuclide	MDA	Background
Cs-137	$2.0 \times 10^{-4}$ uCi	145 counts/1 min
Ba-133	$8.8 \times 10^{-5}$ uCi	204 counts/1 min
Co-57	$1.7 \times 10^{-5}$ uCi	53 counts/1 min

RADIATION SAFETY OFFICER: \_\_\_\_\_

## Close-out Survey/Information

**Date performed:** September 8, 2016

**Performed by:** Sharon Updike, MHP

**Comments:** Sealed sources were removed from our department for transfer to a disposal site by Chase Environmental Group prior to performing the close-out survey.

### Instruments

Wipe tests analyzed with a Capintec CRC15W Well Counter  
s/n : 900271

Radionuclide: Cobalt-57, Cesium-137 MDA for Co-57, Cs-137: 48 dpm, 380.2 dpm  
Date Efficiency performed: 09/16/16 Conversion factor: 1.27 dpm / cpm (Co-57)  
7.49 dpm/cpm (Cs-137)

Area survey performed with the following survey meter:

Manufacturer: Ludlum  
Type: GM  
Model Number: 14C  
Serial Number: 144147  
Probe Model: EW  
Annual Calibration Due: 10/28/16  
Battery check acceptable: YES  
Operational check acceptable: YES  
Current reading: 2.5 mR/hr

### Historical Use of Radionuclides from inception of NRC license

#### Unsealed

Tc99m

#### Sealed

Co-57, Ba-133, Cs-137

**Last date of byproduct radiopharmaceutical use:** 03/17/16

**Visual Check:** The area was checked to ensure that all sealed sources and radioactive waste had been removed. No evidence of radioactive material was noted.

**Sealed Source Leak Testing:** No history of leaks from Sealed Sources. The most recent Sealed Source Leak test is included.

**Radiation Level Survey:** No area within the department demonstrated radiation levels in excess of 0.02 mR/hr. Survey result page attached.

**Removable Contamination:** No area within the department demonstrated removable contamination in excess of 157.5 dpm's. Contamination result page attached.

***Imaging and Hot Lab, Stress Room***

See Diagram Attachment

**Conclusion:** No radioactive materials remain in this area. No removable contamination is present.

A handwritten signature in black ink, located in the bottom right corner of the page. The signature is stylized and appears to be a single name.



**Lansing Cardiovascular Institute, Inc**

**License # 21-26498-01**

**CLOSEOUT SURVEY RESULTS**

**Date:** 9/8/2016

**Performed By:** Sharon Updike, MHP

		Bkg. 429.0 cpm		Bkg. 0.02 mR/hr
	AREA	cpm	net dpm	mR/hr
1	Hot Lab countertop	26.00	65	0.02
2	Hot Lab countertop	26.00	65	0.02
3	Hot Lab floor	26.00	65	0.02
4	Hot Lab countertop	0	0	0.02
5	Hot Lab countertop	0	0	0.02
6	Hot Lab floor	0	0	0.02
7	Hot Lab floor	42.00	105	0.02
8	Hot Lab floor	42.00	105	0.02
9	Stress Area floor	42.00	105	0.02
10	Stress Area floor	4.00	10	0.02
11	Stress Area floor	4.00	10	0.02
12	Treadmill	4.00	10	0.02
13	Stress Area floor	49.00	122.5	0.02
14	Stress Area stretcher	49.00	122.5	0.02
15	Stress Area floor	49.00	122.5	0.02
16	Stress Area floor	63.00	157.5	0.02
17	Stress Area floor	63	157.5	0.02
18	Imaging Area floor	63	157.5	0.02
19	Imaging Area floor	45	112.5	0.02
20	Imaging Area floor	45	112.5	0.02
21	Nuclear Camera	45	112.5	0.02
22	Imaging Area floor	19	47.5	0.02
23	Imaging Area floor	19	47.5	0.02
24	Imaging Area floor	19	47.5	0.02
25	Imaging Area floor	30	75	0.02
26	Imaging Area floor	30	75	0.02
27	Imaging Area floor	30	75	0.02
28	Imaging Area floor	40	100	0.02
29	Imaging Area floor	40	100	0.02
30	Imaging Area floor	40	100	0.02
31	Imaging Area floor	40	100	0.02

**ACTION LEVELS: 2000 dpm/100 cm<sup>2</sup>**

**< 0.2 mR/hr**

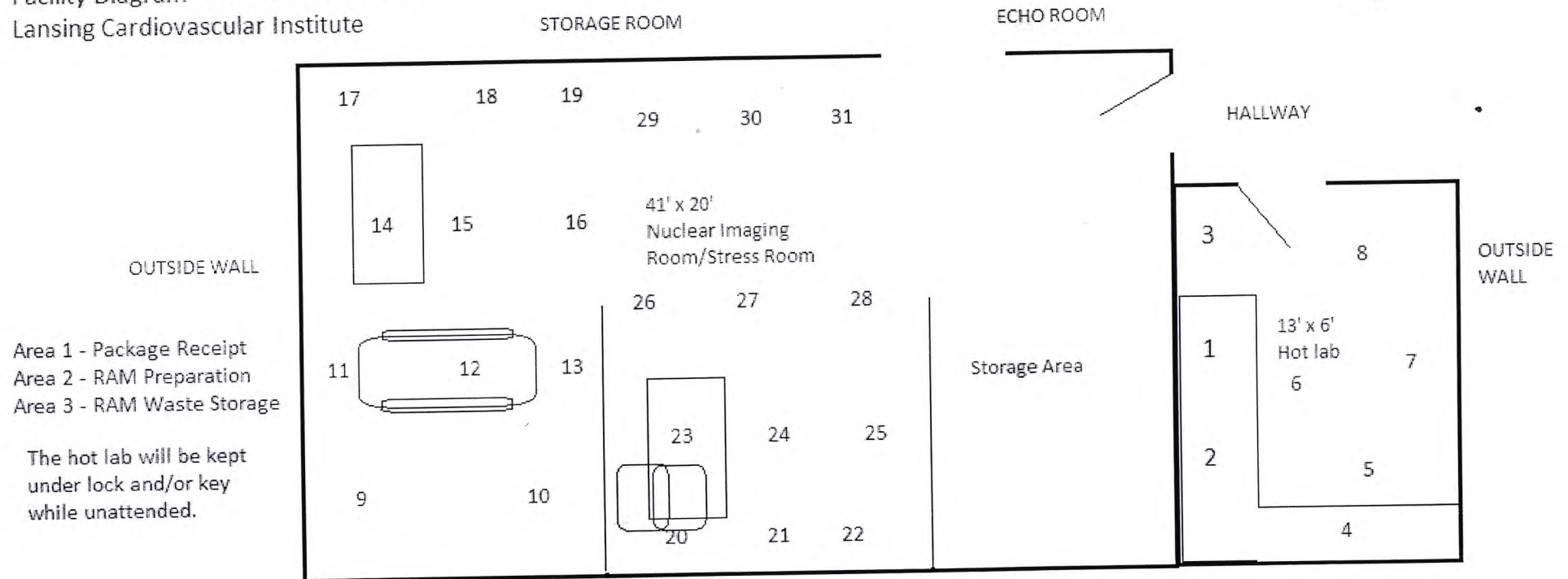
**COMMENTS: No evidence of removable contamination.**

## Attachment 9.1

## Facility Diagram CLOSE-OUT SURVEY/WIPES

## Lansing Cardiovascular Institute

SECURITY-RELATED INFORMATION WITHHOLD UNDER 10 CFR 2.390



There is a physician office located above the nuclear department and nothing located below.

SECURITY-RELATED INFORMATION WITHHOLD UNDER 10 CFR 2.390



[illegible]



UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST CONTAINER AND WASTE DESCRIPTION				1. MANIFEST TOTALS							2. MANIFEST NUMBER							
				SPECIAL NUCLEAR MATERIAL (grams)														
NUMBER OF PACKAGES	NET WASTE VOL. m3/m3	NET WASTE WEIGHT kg	U-233				U-235		Pu		TOTAL							
1	0.019	14	NP				NP		NP		NP							
				ACTIVITY (MBq/mCi)							SOURCE							
				ALL NUCLIDES							Tritium							
				1.77E+01 MBq							NP							
				4.79E-01 mCi							NP							
				C-14							Tc-99							
				NP							I-129							
				NP							0.00E+00							
											SHIPPER ID NUMBER							
											N/A							
DISPOSAL CONTAINER DESCRIPTION						WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER												
5. CONTAINER IDENTIFICATION NUMBER/GENERATOR NUMBER	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL (uSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2	11. WASTE DESCRIPTION				12. Approximate WASTE VOLUME IN CONTAINER (m3)		13. Sorbent Solidification Stabilization MEDIA (See Note 3)		14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION		16. WASTE CLASS
AL-SD-W-16-431 1647	4	0.019	14	38.8	<3.67E-6	<3.67E-5	36	0.019	100	Oxide/NP	NP	Cs-137	1.05E+01	2.84E-01	Na	AS-A STABLE		
												Package total	1.77E+01	4.79E-01				

NOTE 1: Container Description Codes. For containers/

Waste requiring disposal in approved structural overpacks,

the numerical code must be followed by "DP".

- |                               |   |
|-------------------------------|---|
| 1. Wooden Box or Crate        | 9. Demineralizer                                  |
| 2. Metal Box                  | 10. Gas Cylinder                                  |
| 3. Plastic Drum or Pail       | 11. Bulk, Unpackaged Waste                        |
| 4. Metal Drum or Pail         | 12. Unpackaged Components                         |
| 5. Metal Tank or Liner        | 13. High Integrity Container                      |
| 6. Concrete Tank or Liner     | 14. Other, describe in Item 8, or additional page |
| 7. Polyethylene Tank or Liner |   |
| 8. Fiberglass Tank or Liner   |   |

Note 2: Waste Descriptor Codes. (Choose up to three which predominate by volume.)

- |                     |                                  |
|---------------------|----------------------------------|
| 20. Charcoal        | 29. Demolition Rubble            |
| 21. Incinerator Ash | 30. Cation Ion Exchange Media    |
| 22. Soil            | 31. Anion Ion Exchange Media     |
| 23. Gas             | 32. Mixed Bed Ion Exchange Media |
| 24. Oil             | 33. Contaminated Equipment       |
| 25. Aqueous Liquid  | 34. Organic Liquid (Except Oil)  |
| 26. Filter Media    | 35. Glassware or Labware         |
| 27. Machined Filter | 36. Sealed Source/Device         |
| 28. EPA or State    | 37. Pulp or Paving               |
|                     | Hazardous                        |

Note 3: For solidification media that meet disposal site structural stability requirements, the numerical code must be followed by "S".

For all solidification media, the vendor (manufacturer) and brand name must also be identified in Item 13. Code 100 = NONE REQUIRED.

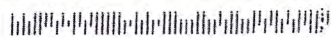
- |                 |                    |                    |  |  |           |
|-----------------|--------------------|--------------------|--|--|-----------|
| 60. Speedi-Dri  | 65. Flocc          | 73. Oicopent HP500 | 85. Other, Describe in Item 13, or additional page | 90. Cement   | 100. None |
| 61. Celatran    | 67. Fluoro X       | 74. Fluorol        |  | 81. Concrete (Encapsulation)                       | Required  |
| 62. Floort Dryl | 69. Solid A-Rite   | 75. Polysol II     |  | 92. Bitumen  |           |
| 63. Hi Di       | 70. Chemasil 50    | 76. Aquasol        |  | 93. Vinyl Chloride                                 |           |
| 64. Safe-T-Sorb | 71. Chemasil 2000  | 77. Aquasol II     |  | 94. Vinyl Ester Styrene                            |           |
| 65. Safe-X-Dri  | 72. Chemasil HP200 |                    |  | 95. Other, Describe in Item 13, or Additional Page |           |



NRC FORM 542 (5-1998)			U.S. NUCLEAR REGULATORY COMMISSION			1. WASTE COLLECTOR/PROCESSOR NAME Chase Environmental Group, Inc. IDENTIFICATION NUMBER T-KY003-L16 SHIPPING DATE 8/4/2016				2. MANIFEST NUMBER AL-2016-261 3. PAGE_1_OF_1_PAGE(S)	
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST											
MANIFEST INDEX AND REGIONAL COMPACT TABULATION List all original "PROCESSED WASTE" before "COLLECTED WASTE".											
4. GENERATOR IDENTIFICATION NUMBER	5. GENERATOR NAME PERMIT NUMBER AND TELEPHONE NUMBER	6. GENERATOR FACILITY ADDRESS	7. PREPROCESSED WASTE (OR MATERIAL) VOLUME (m3)	8. MANIFEST NUMBER UNDER WHICH WASTE (OR MATERIAL) RECEIVED AND DATE OF RECEIPT	9. WASTE CODE (H-NUCLEAR OR H-DEBRIS)	10. ORIGINATING COMPACT OR STATE	11. AS PROCESSED/COLLECTED TOTAL				
A. SOURCE MATERIAL (kg)	B. SHM (g)	C. ACTIVITY (MBq)	D. VOLUME (m3)								
1647	Cardiology Consultants, P.C. 517-882-8222	5848 Executive Dr. Lansing, MI 48911	0.019	NA	C	MI	0.00E+00	NP	1.77E+01	0.019	
TOTALS OF ALL PAGES (NRC FORMS 542 AND 542A)							0.000	0.000	1.77E+01	0.019	



Cardiology Consultants, P.C.  
5848 Executive Dr.  
Lansing, MI 48911  
517-882-8222



UNITED STATES NUCLEAR REGULATORY COMMISSION  
REGION III, MATERIAL LICENSING  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, IL 60532-4352

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