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March 5, 2010  
UNITED STATES NUCLEAR REGULATORY COMMISSION  
Region III, Materials Licensing Section  
2443 Warrenville Road  
Suite 210  
Lisle, IL 60532-4352

Dear Sir/Madam:

Please terminate our NRC License No. 21-24901-01, Cardiology Consultants, P.C.

The results of the close-out surveys are enclosed for your review.

Thank you for your cooperation with this matter. If you have any questions or require additional information please contact our physics consultant, Michelle Kritzman, at (734)622-3197.

Sincerely,



Dr. Harry T. Colfer, MD  
President  
Cardiology Consultants, PC



## Close-out Survey Information

**Close-out Location:**

**Cardiology Consultants, P.C.**  
560 West Mitchell, Suite 500  
Petoskey, MI 49770

**Date performed:** February 19 and 26, 2010

**Performed by:** James Carson, CNMT

**Comments:** This location was used for 35.200 activities. The isotopes used for imaging were Tc-99m and Tl-201. The last day of use for Tc-99m was on 12/28/2009. The last day of use for Tl-201 was on 12/30/2009. All sealed sources were removed on 2/26/2010.

**Instruments:**

Wipe tests analyzed on the following Well counter:

Instrument: CAPTUS 3000 S/N 900271

Spectrum: Full Spectrum

Efficiency Full Spectrum: 40%

Area survey performed with the following survey meter:

Manufacturer:	<u>Ludlum</u>
Type:	<u>GM</u>
Model Number:	<u>14C</u>
Serial Number:	<u>180556</u>
Probe Model:	<u>End Window</u>
Check source value:	<u>0.7mR/hr</u>

**Radionuclides Used:**

**Unsealed**

Tc-99m

Tl-201

**Sealed**

Cs-137

Ba-133

Co-57

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

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

**Removable Contamination:** No area within the department demonstrated removable contamination in excess of 132 dpm's.

**Surveys, Wipes, and Diagrams are enclosed for review.**

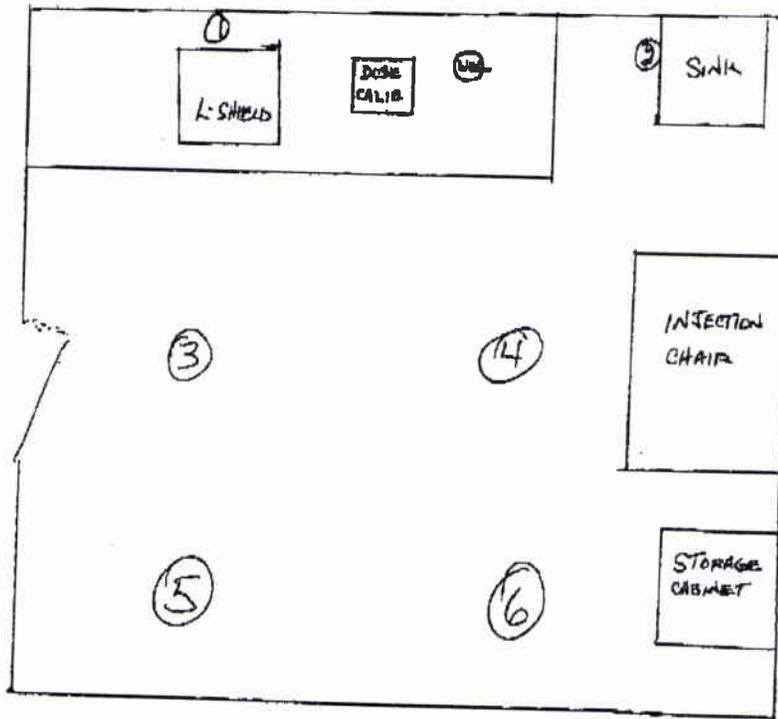
**Conclusion:** No radioactive materials remain in this area. No removable contamination is present.

Cardiology Consultants, P.C.				
License # 21-24901-01				
Date: 2/19/2010			Performed By: J. Carson, CNMT	
Survey Meter: Ludlum 14C			Check Value: 0.7 mR/hr	
		net cpm	net dpm	mR/h
<b>Hot Lab</b>				
1	Counter Top	23	57	0.02
2	Floor & Sink	23	57	0.02
3	Floor	23	57	0.02
4	Floor & Injection Chair	15.8	0	0.02
5	Floor & Storage Cabinet	15.8	0	0.02
6	Floor	15.8	0	0.02
<b>Stress Lab</b>				
1	Bed	48	120	0.02
2	Sink	48	120	0.02
3	Treadmill	48	120	0.02
4	Cabinet & Computer	0	0	0.02
5	Floor	0	0	0.02
6	Floor	0	0	0.02
7	Floor	29	72	0.02
8	Floor	29	72	0.02
9	Floor	29	72	0.02
10	Floor	43	107	0.02
11	Floor	43	107	0.02
12	Floor	43	107	0.02
13	Floor	43	107	0.02
<b>Camera Room</b>				
1	Desk	14	35	0.02
2	Desk	14	35	0.02
3	Computer	14	35	0.02
4	Computer	5	12	0.02
5	Camera	5	12	0.02
6	Table	5	12	0.02
7	Floor	17	42	0.02
8	Floor	17	42	0.02
9	Floor	17	42	0.02
10	Floor	13	32	0.02
11	Floor	13	32	0.02
12	Floor	13	32	0.02
13	Chair	53	132	0.02
14	Floor	53	132	0.02
15	Floor	53	132	0.02
16	Floor	53	132	0.02
	Background	479.2		0.02
Conversion factor 2.5 dpm/cpm				
<b>COMMENTS: No evidence of removable contamination.</b>				

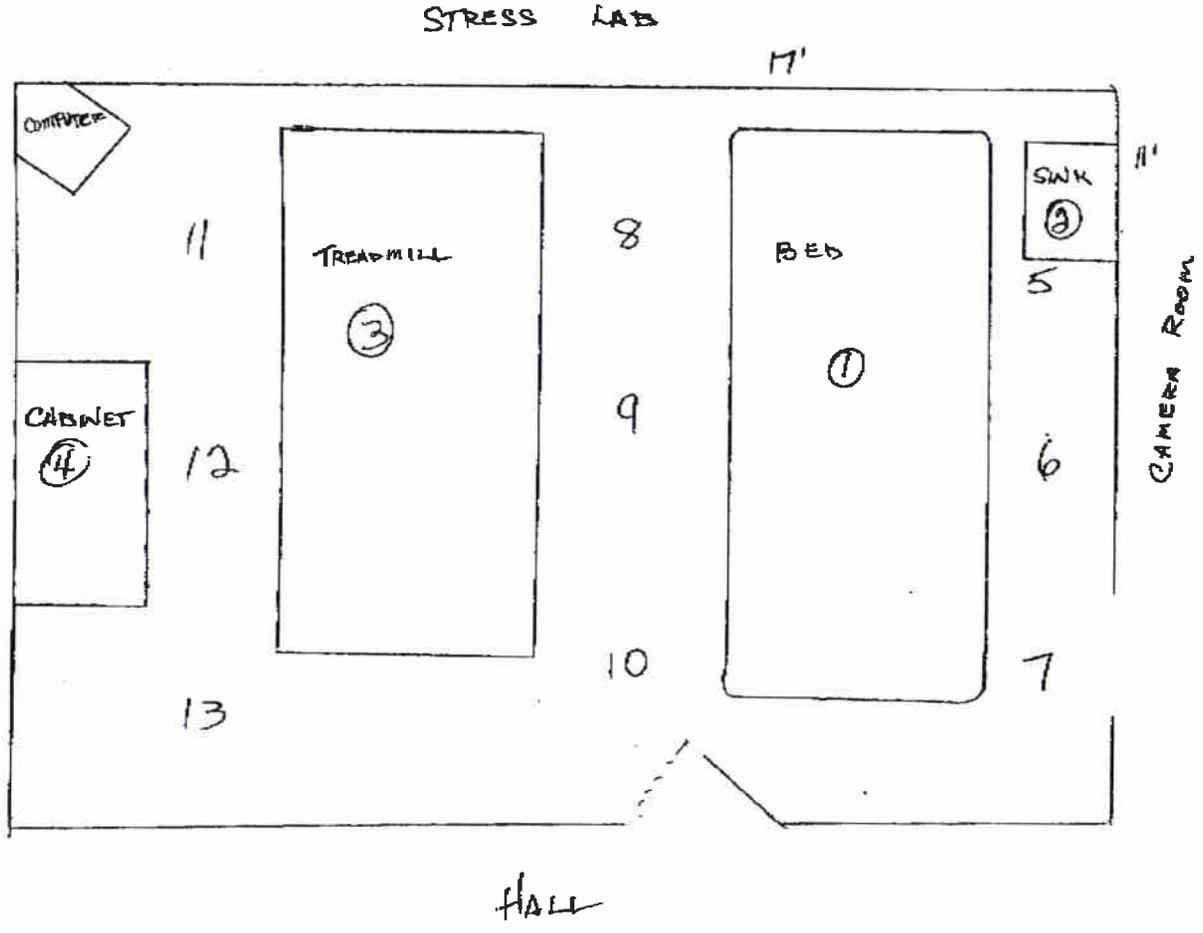
Cardiology Consultants, P.C.				
License # 21-24901-01				
Date: 2/26/2010		Performed By: J. Carson, CNMT		
Survey Meter: Ludlum 14C		Check Value: 0.7 mR/hr		
		net cpm	net dpm	mR/h
Hot Lab				
1	Floor	0	0	0.02
2	Counter Top	0	0	0.02
	Background	475		0.02
Conversion factor 2.5 dpm/cpm				
<b>COMMENTS: No evidence of removable contamination.</b>				

Cardiology Consultants, P.C.  
560 West Mitchell, Suite 500  
Petoskey, MI 49770

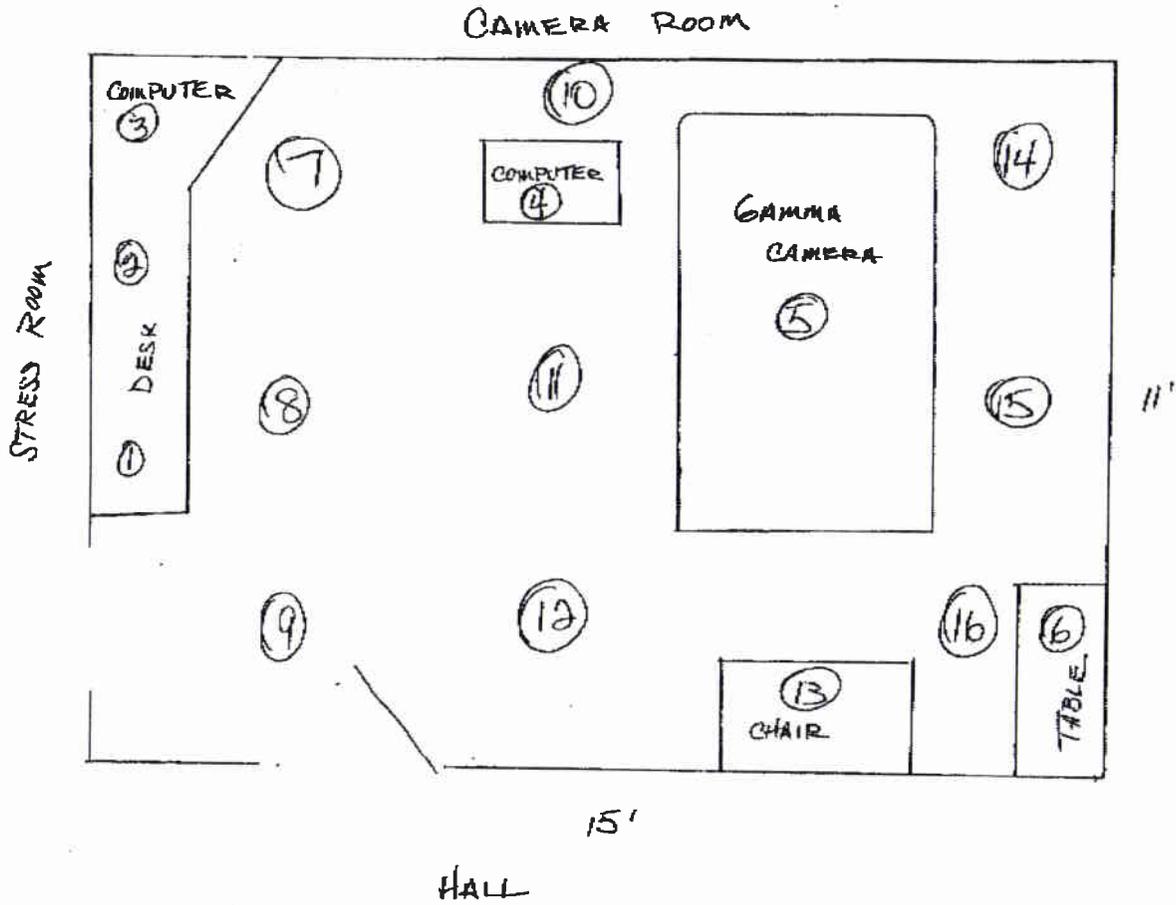
HOT LAB



Cardiology Consultants, P.C.  
560 West Mitchell, Suite 500  
Petoskey, MI 49770



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Petoskey, MI 49770





**HAZMAT Employee Training**  
**Hazardous Materials Shipping Paper- Normal Form Materials**

To: Date: 2-26-2010  
 Facility CARDIAC INSTITUTE DBA MICHIGAN HEART & VASCULAR SPECIALISTS  
 License # 21-32345-01  
 Address 560 W. MITCHELL, ST 400 PETERSBURG, MI 49770  
 Contact Person JAMES CARSON RN/RT  
 Phone 231-487-5878

From:  
 Facility CARDIOLOGY CONSULTANTS, P.C.  
 License # 21-24901-01  
 Address 560 W. MITCHELL ST. 500 PETERSBURG, MI 49770  
 Contact Person HAROLD COLFER MD  
 Phone 231-487-5886

Radioactive Material, Type A package, non special form, non fissile, or fissile excepted	Isotope(s)	Quantity (MBq)	Quantity and Type of Package(s)	Label (circle one)	Transport Index (exp @ 1 meter - only for Yellow II)
Class 7 Radioactive Material UN 2915	Cs-137 VIAL SOURCE	6,807	1 Type A container	White I or Yellow II	
	Bc-133 VIAL SOURCE	4,977			

**Survey Results:**

**Contamination:**

Wipe Results in DPM/300 cm<sup>2</sup> 0  
 Instrument Used CAPTEC CRC-150 MO310  
 (must be less than 6600 dpm in 300 cm<sup>2</sup> swipe)

**Exposure:**

0.8 mR/hr at surface  
0.02 mR/hr at 1 meter  
 (white I - <=0.5 @ surface, bkg @ 1m.)  
 (yellow II - 0.5- 50 @ surface, <1 @ 1m.)

**Shipper's Certification:**

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

James Carson Signature Date 2-26-10

EMERGENCY RESPONSE NUMBER 231-487-5878

NOTE: SOURCES PLACED IN DOSE TRANSPORT AMMO CAN. AND CARRIED FROM CARDIOLOGY CONSULTANTS TO CARDIAC INSTITUTE WITHIN THE SAME BUILDING BY JAMES CARSON, RSO, WITHOUT INCIDENT.

UPON AERIAL AT CARDIAC INSTITUTE:  
 EXPOSURE: 0.02 mR/hr @ 1 meter  
0.8 mR/hr @ surface  
 WIPE: 0 DPM/300 cm<sup>2</sup>

James Carson RSO



**HAZMAT Employee Training**  
**Hazardous Materials Shipping Paper- Normal Form Materials**

To: Cardiac Institute  
 Facility DBA MICHIGAN HEART & VASCULAR SPECIALISTS  
 License # 21-34345-01  
 Address 560 W. MITCHELL ST. 400, PETERSBURG, MI 49770  
 Contact Person JAMES CARSON RN  
 Phone 231-487-5878

From: Cardiology Consultants, PC  
 Facility Cardiology Consultants, PC  
 License # 21-24901-01  
 Address 560 W. MITCHELL ST. 500 PETERSBURG, MI 49770  
 Contact Person HAROLD COLFER MD  
 Phone 231-487-5886

Radioactive Material, Type A package, non special form, non fissile, or fissile excepted	Isotope(s)	Quantity (MBq)	Quantity and Type of Package(s)	Label (circle one)	Transport Index <small>(exp @ 1 meter - only for Yellow II)</small>
Class 7 Radioactive Material UN 2915	Co-57 FLOOD SOURCE	12.25	1 Type A container	White I or Yellow II	
	Co-57 FLOOD SOURCE	57.91			

**Survey Results:**

**Contamination:**

Wipe Results in DPM/300 cm<sup>2</sup> 20  
 Instrument Used CAPWTEC CRC-15W #170310  
(must be less than 6600 dpm in 300 cm<sup>2</sup> swipe)

**Exposure:**

0.15 mR/hr at surface  
0.03 mR/hr at 1 meter  
(white I- <= 0.5 @ surface, bkg @ 1m.)  
 (yellow II- 0.5- 50 @ surface, <1 @ 1m.)

**Shipper's Certification:**

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

James Carson  
 Signature

2-26-10  
 Date

EMERGENCY RESPONSE NUMBER 231-487-5878

NOTE: SOURCES WALKED FROM CARDIOLOGY CONSULTANTS OFFICE TO CARDIAC INSTITUTE WITHIN THE SAME BUILDING BY JAMES CARSON, RSO, WITHOUT INCIDENT. SOURCES WERE IN THEIR LEAD STORAGE CASES. James Carson RSO

UPON ARRIVAL AT CARDIAC INSTITUTE:

**EXPOSURE:**

0.15 mR/hr @ SURFACE  
0.03 mR/hr @ 1 METER

WIPE: 0 DPM/300 CM<sup>2</sup>

Name: CARDIOLOGY CONSULTANTS

Date: 7-26-2010 Performed By: J. CARSON

Survey Meter: LUDUM-14C #780556 Check Value: 0.7 mR/hr

	Location	Survey Results (mR/hr)
1	HOT LAB FLOOR	0.02 mR/hr
2	HOT LAB COUNTER TOP	0.08 mR/hr
3		
4	SURVEYS AFTER REMOVAL OF	
5	RADIOACTIVE SOURCES	
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Michigan  
Heart & Vascular  
Specialists

FAX COVER SHEET

DATE 5-19-10	TIME 11:00 AM	PAGES 13
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TO  
US NRC  
ATTN: MATERIAL LICENSING

PHONE  
FAX 630-824-9782

03029838

FROM  
Michigan Heart & Vascular Specialists  
560 West Mitchell, Suite 400  
Petoskey, Michigan 49770  
231-487-2490 Fax 231-487-6055

TRANSMITTED BY J. CARSON CUNT 231-487-5878

MESSAGE  
THIS PACKET WAS ORIGINALLY FAXED ON 3-22-10  
BY ME. I AM TOLD IT WAS NOT RECEIVED AND SO AM SENDING  
THEM AGAIN.  
James J. Carson CUNT  
RSO  
MICHIGAN HEART + VASCULAR SPECIALISTS

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