



HENRY FORD HEALTH CENTER - BROWNSTOWN  
A Henry Ford Wyandotte Hospital Facility

September 18, 2012

**Downriver Cardiology**

Henry Ford Health Center  
23050 West Road, Suite 120  
Brownstown, MI 48183  
(734) 671-1510 Phone  
(734) 671-1570 Fax

*Joseph C. Rogers, D.O.*

*Felix J. Rogers, D.O.*

*Kevin J. Berlin, D.O.*

*Sherie Charron, PA-C*

*Ed O'Connell, PA-C*

*Courtney Gearhart, PA-C*

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

RE: Amendment to NRC License No 21-26330-01  
Downriver Cardiology Consultants, P.C.

Dear Sir/Madam:

Item #1

Please remove the following location of use from our license:

Downriver Cardiology Consultants, P.C.  
5400 Fort st Suite 200  
Trenton, Michigan

A close-out survey was performed on August 30, 2012 of the above address and is enclosed for your review.

The last date of receipt and use of radioactive material at this site was August 22, 2012. A current copy of the leak test results for the sealed sources used at our facility is enclosed for your review. Sealed sources and radioactive waste were removed from our department for transfer to the 23050 West Rd Suite 120 Brownstown, Michigan location listed on our NRC License prior to performing the close-out survey.

Thank you for your cooperation. If you have any questions or require additional information, please contact our physics consultant, Sharon Updike at 734-662-3197.

Respectfully Yours,

Pamela Manchester  
Interim Practice Manager  
Downriver Cardiology Consultants, P.C.

RECEIVED SEP 19 2012

ENVISION *the next 100 years.*



## Close-out Survey

**Date performed:** August 30, 2012

**Performed by:** Sharon Updike, MHP

**Comments:** Sealed sources and radioactive waste were removed from our department for transfer to the the 23050 West Road, Suite 120, Brownstown, Michigan location listed on our NRC license prior to performing the close-out survey.

### **Instruments**

Wipe tests analyzed with a Capintec Captus 3000 Well Counter  
s/n :900271

Radionuclide: Cobalt-57      MDA for C0-57: 47 dpm  
Date Efficiency performed: 03/30/11      Conversion factor: 2.5 dpm / cpm

Area survey performed with the following survey meter:

Manufacturer: Ludlum  
Type: GM  
Model Number: 14C  
Serial Number: 86223  
Probe Model: 44-7  
Annual Calibration Due: 09/26/12  
Battery check acceptable: YES  
Operational check acceptable: YES  
Current reading: 1.0 mR/hr

### **Radionuclides Used**

**Unsealed**  
Tc99m

**Sealed**  
Co-57, Ba-133, Cs-137

**Last date of byproduct radiopharmaceutical use:** 08/22/2012

**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.

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

**Removable Contamination:** No area within the department demonstrated removable contamination in excess of 0 dpm's.

***Hot Lab, Stress, Imaging and Preparation Areas***

See Diagram Attachment

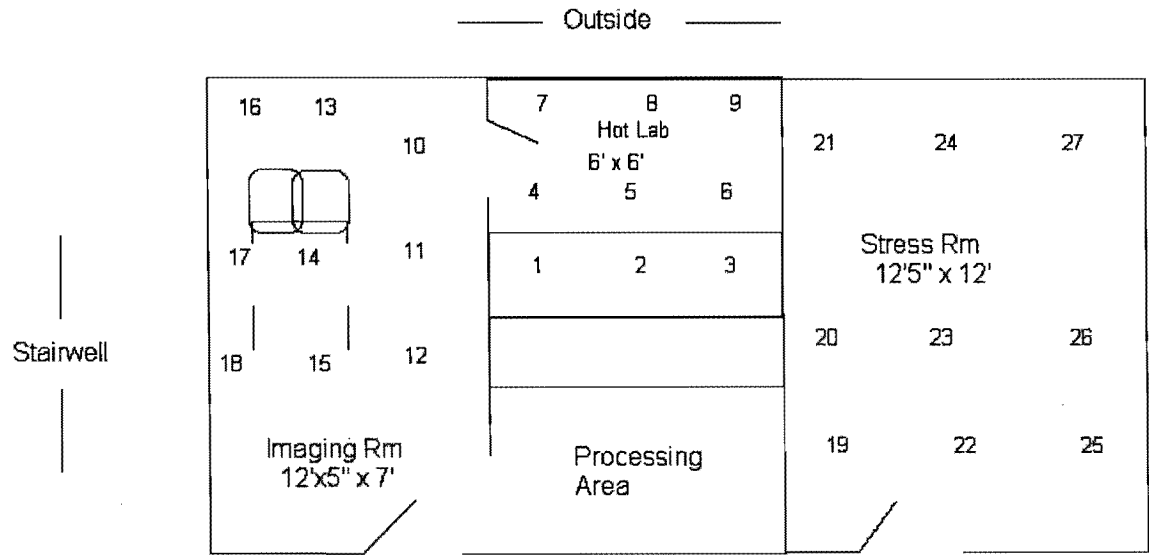
**Conclusion:** No radioactive materials remain in this area. No removable contamination is present.

# sarkarclose

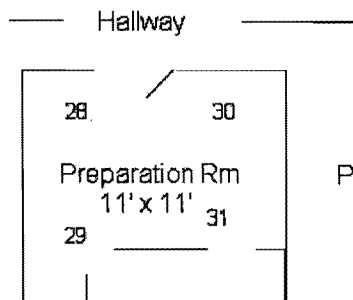
	A	B	C	D	E
1					
2	<b>Downriver Cardiology, P.C.</b>				
3	<b>License # 21- 26330-01</b>				
4	<b>CLOSEOUT SURVEY RESULTS</b>				
5					
6		<b>Date:</b> 8/30/12		<b>Performed By:</b> Sharon Updike, MHP	
7					
8					
9					
10					
11			Bkg. 604.2 cpm		Bkg. 0.02 mR/hr
12		AREA	cpm	net dpm	mR/hr
13	1	Hot Lab	571.00	0 dpm	0.02
14	2	Hot Lab	571.00	0 dpm	0.02
15	3	Hot Lab	571.00	0 dpm	0.02
16	4	Hot Lab	540.00	0 dpm	0.02
17	5	Hot Lab	540.00	0 dpm	0.02
18	6	Hot Lab	540.00	0 dpm	0.02
19	7	Hot Lab	584.00	0 dpm	0.02
20	8	Hot Lab	584.00	0 dpm	0.02
21	9	Hot Lab	584.00	0 dpm	0.02
22	10	Imaging Area	541.00	0 dpm	0.02
23	11	Imaging Area	541.00	0 dpm	0.02
24	12	Imaging Area	541.00	0 dpm	0.02
25	13	Imaging Area	510.00	0 dpm	0.02
26	14	Imaging Area	510.00	0 dpm	0.02
27	15	Imaging Area	510.00	0 dpm	0.02
28	16	Imaging Area	602.00	0 dpm	0.02
29	17	Imaging Area	602.00	0 dpm	0.02
30	18	Imaging Area	602.00	0 dpm	0.02
31	19	Stress Room	583.00	0 dpm	0.02
32	20	Stress Room	583.00	0 dpm	0.02
33	21	Stress Room	583.00	0 dpm	0.02
34	22	Stress Room	579.00	0 dpm	0.02
35	23	Stress Room	579.00	0 dpm	0.02

36	24	Stress Room	579.00	0 dpm	0.02
37	25	Stress Room	574.00	0 dpm	0.02
38	26	Stress Room	574.00	0 dpm	0.02
39	27	Stress Room	574.00	0 dpm	0.02
40	28	Prep. Room	580.00	0 dpm	0.02
41	29	Prep. Room	580.00	0 dpm	0.02
42	30	Prep. Room	580.00	0 dpm	0.02
43	31	Prep. Room	580.00	0 dpm	0.02
44	32				
45	33				
46	34				
47	35				
48	36				
49	37				
50	38				
51	39				
52	40				
53	41				
54	42				
55					
56		<b>ACTION LEVELS: 2000 dpm</b>			
57			<b>&lt; 0.2 mR/hr</b>		
58		<b>COMMENTS: No evidence of removable contamination.</b>			
59					
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63					
64					

Area 1 - RAM Waste Storage  
Area 2 - Dose Preparation  
Area 3 - Package Receipt



Echo Stress Area



There is nothing located above and physician exam rooms located below the nuclear department. The hot lab is under lock and/or key when unattended.

SECURITY- RELATED INFORMATION -WITHHOLD UNDER 10 CFR 2.390

**RADIOACTIVE MATERIAL SHIPPING PAPERS**

Date: 8-30-12

**FROM:**  
 Facility: Downriver Cardiology  
 NRC License #: 21-26330-01  
 Address: 5400 Fort St  
Troy MI

**TO:**  
 Facility: Saml  
 NRC License #: Saml  
 Address: 23050 West Oak Suite 120  
Brownstown, MI

Contact Person: Rachel McNamee, CNMT  
 EMERGENCY RESPONSE NUMBER 734-624-0641

Quantity of Packages 2 Radioactive Material, Type A package(s), non special form, non fissile, or fissile excepted  
 Class 7 Radioactive Material  
 UN ~~2045~~ 2910 *a sealed source transferred to new location of use as Limited Quantity UN 2910*

Isotope(s)	Quantity (MBq)	Label (circle one)	*Contamination Wipe Results in dpm/300 cm <sup>2</sup>	*Exposure	TI (exp @ 1 meter - only for Yellow II)
CS-137 vial CS-137 Red Ba-133 vial	133.8 uCi 0.404 uCi 48.85 uCi	<del>White I or Yellow II</del>	$\emptyset$	0.2 mR/hr at surface .02 mR/hr at 1 meter	<del>X</del>
Co-57 Flood	71 uCi	<del>White I or Yellow II</del>	$\emptyset$	0.02 mR/hr at surface 0.02 mR/hr at 1 meter	<del>X</del>
		White I or Yellow II		____ mR/hr at surface ____ mR/hr at 1 meter	
		White I or Yellow II		____ mR/hr at surface ____ mR/hr at 1 meter	

\*Contamination (must be less than 6600 dpm in 300 cm<sup>2</sup> swipe)

\*Survey Results (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.

*R. Updell*  
 Technologist Signature

8-30-12  
 Date

**Sealed Source Inventory**

Licensee: Down River Cardiology

Date: 03/29/12

Performed by: Sharon Updike

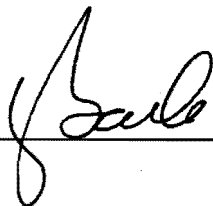
Nuclide	Type	Calibration		Location	M/N	S/N
		Activity	Date			
Cs-137	Vial	220 uCi	12/14/90	Hot Lab	NES-356	S356018003
Current Activity: 134.49 uCi						
Ba-133	Vial	264 uCi	04/28/86	Hot Lab	MLD-01	225647C
Current Activity: 49.519 uCi						
Cs-137	Disc	1 uCi	06/01/91	Meter		1444
Current Activity: 0.618 uCi						
Cs-137	Rod	0.5 uCi	04/01/03	Hot Lab	IPL	849-33-90
Current Activity: 0.406 uCi						
Co-57	Flood	10 mCi	03/01/07	Hot Lab	NES8510	1228-191
Current Activity: 0.087 mCi						

**SEALED SOURCE AMBIENT EXPOSURE SURVEY**

Meter:

Max Reading:

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







### Sealed Source Leak Test

Licensee: Down River Cardiology

Date: 03/29/12

Performed by: Sharon Urdike

Nuclide	Type	Calibration		Location	M/N	S/N
		Activity	Date			
Cs-137	Vial	220 uCi	12/14/90	Hot Lab	NES-356	S356018003
		Current Activity: 134.49uCi				
Ba-133	Vial	264 uCi	04/28/86	Hot Lab	MLD-01	225647C
		Current Activity: 49.519uCi				

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: \_\_\_\_\_



September 14, 2012

Pam Manchester  
Business Office Manager  
**Down River Cardiology**  
5400 Fort Street, Suite 200  
Trenton, MI 48183

Dear Ms. Manchester:

Please find the enclosed information required to amend your current NRC license. The following steps need to be taken for completion.

### **NRC License Amendment**

1. Review carefully and be sure all information is correct. Retype cover letter onto **Facility** letterhead.
2. Executive management (VP or higher) must sign the cover letter to the NRC. Please type their name below the signature.
3. Make three (3) copies of the cover letter, close-out survey and diagram, and most recent sealed source leak test.
4. Mail two (2) of the signed copies to the following address: ***Fed-Ex or UPS mail is advised. Make sure you include the Close-out Survey with diagram and Sealed Source Leak Test.***

**UNITED STATES NUCLEAR REGULATORY COMMISSION**  
**Region III, Office of Materials Licensing**  
**2443 Warrenville Road, Suite 210**  
**Lisle, IL 60532-4352**

6. Keep the original for your files.

2309 Shelby Avenue  
Ann Arbor, MI 48103  
(734) 662-9224 Fax  
(734) 662-3197

70 E. 91st Street, Suite 106  
Indianapolis, IN 46240  
(317) 581-1931 Fax  
(317) 581-1911

4806 Mile High Drive  
Salt Lake City, UT 84124  
(801) 272-2952 Office & Fax

N7375 Crystal Ridge Drive  
Beaver Dam, WI 53916  
(920) 885-9872 Fax  
(920) 885-9870

RT 493 1 D  
6147 09.19  
FZ 495

FedEx  
TRK# 8738 6434 6147  
0215

WED - 19 SEP A1  
STANDARD OVERNIGHT

60532  
IL-US  
ORD

NA ENLA



Emp# 195478 18SEP12 DTWA 515C1/803A/AM4

FedEx US Airbill  
Express

FedEx Tracking Number 8738 6434 6147

1 From This portion can be removed for Recipient's records.

Date 9-18-12 FedEx Tracking Number 873864346147

Sender's Name DR JOSEPH ROGERS Phone 734 675-2220

Company DOWNRIVER CARDIOLOGY CONSULTS

Address 23050 WEST RD SUITE 100

City Brownsstown

State MI ZIP 48183

RECIPIENT: PEEL HERE

2 Your Internal Billing Reference

3 To Recipient Name Medical Physics Consultants, Inc

Company United States Nuclear Regulatory Commission

Address Region III, Office of Materials Licensing

Address 2443 Warrenville Rd., Ste 310

City Lisle State IL ZIP 60532-4352

fedex.com 1.800.GoFedEx 1.800.463.3339

Insert airbill here



8738 6434 6147

0427357168

Recipient's Copy

4a Express Package Service

FedEx Priority Overnight  
Next business morning. \* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx Standard Overnight  
Next business afternoon. \* Saturday Delivery NOT available.

FedEx 2Day  
Second business day. \* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx Express Saver  
Third business day. \* Saturday Delivery NOT available.

4b Express Freight Service

FedEx 1Day Freight  
Next business day. \*\* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 2Day Freight  
Second business day. \*\* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 3Day Freight  
Third business day. \*\* Saturday Delivery NOT available.

5 Packaging

FedEx Envelope\*  
\* Declared value: limit \$500.

FedEx Pak\*  
Includes FedEx Small Pak and FedEx Large Pak.

FedEx Box

FedEx Tube

Other

6 Special Handling and Delivery Signature Options

SATURDAY Delivery  
NOT available for FedEx Standard Overnight, FedEx Express Saver, or FedEx 3Day Freight.

No Signature Required  
Package may be left without obtaining a signature for delivery.

Direct Signature  
Someone at recipient's address may sign for delivery. Fee applies.

Indirect Signature  
If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?  
One box must be checked.

No  Yes  
If yes, see attached Shipper's Declaration.

Dry Ice  
Dry Ice, 3, UN 1845

Cargo Aircraft Only

Payment Bill to:

Sender  
Enter FedEx Acct. No. or Credit Card No. below.

Recipient

Third Party

Credit Card

Cash/Check

Total Packages: [redacted] Total Weight: [redacted]

Credit Card Auth: [redacted]

605