



# HEART & VASCULAR INSTITUTE™

CARDIOVASCULAR EXCELLENCE

COMPREHENSIVE CARDIOVASCULAR CARE



FULLY ACCREDITED LAB

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February 20, 2018

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

RE: Close Dearborn (Monroe) Location  
**NRC License No. 21-32784-01**

Dear Sir/Madam:

We request the following change to our NRC License:

### ITEM #1 – Close Location of Use

Please close our location of use at:

Heart and Vascular Institute  
2421 Monroe Street Suite 101  
Dearborn, MI 48124

The results of the close-out (survey, wipes, diagram, etc.) are enclosed for your review.

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

Sincerely,

Hanady Beydoun  
Regional Manager  
Heart and Vascular Institute

RECEIVED MAR 02 2018

## Close-out Survey Information

### Close-out Location:

Heart and Vascular Institute  
2421 Monroe Street  
Dearborn, MI

**Date Performed:** February 2, 2018

**Performed By:** Cari Dzanbazoff, Medical Physics Consultants Inc.

**Comments:** Radioactive sealed sources were properly transferred to the other Heart and Vascular (HVI) Dearborn location located at:  
22720 Michigan Ave  
Suite 200  
Dearborn, MI

Sealed source leak test is enclosed.

### Instruments:

Wipes for contamination performed with the following well counter:

Manufacturer: Capintec  
Model Number: Captus 4000e  
Serial Number: 901707  
Efficiency Factor: 2.5 dpm/cpm

Area survey performed with the following survey meter:

Manufacturer: Ludlum  
Type: GM  
Model Number: Model 14 C  
Serial Number: 164793  
Probe Model: End Window Probe  
Calibration Date: 2/24/17  
Calibration Due Date: 2/24/18

Battery check acceptable:	<u>YES</u>
Operational check acceptable:	<u>YES</u>
Constancy check acceptable:	<u>YES</u>
Check source value:	<u>4.0 mR/hr</u>

Radionuclides Used:

**Unsealed**

Tc-99m, Tl-201

**Sealed**

Ba-133, Co-57, Cs-137

All sealed sources were properly transferred to the HVI other Dearborn location.

Sealed source leak tests enclosed.

**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 lab demonstrated radiation levels in excess of the background reading of 0.02 mR/hr.

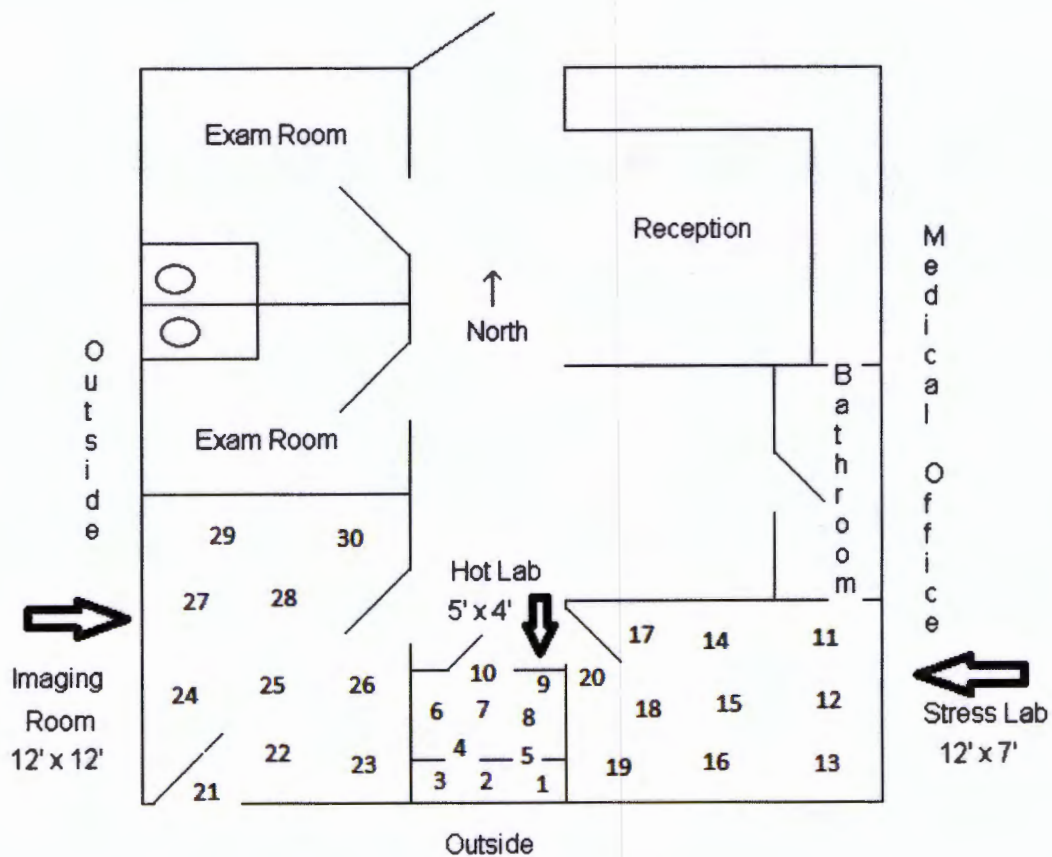
**Removable Contamination:** No area within the lab demonstrated removable contamination in excess of established trigger levels.

**Sealed Sources:** All sealed sources were properly transferred to the HVI other Dearborn location. Sealed source leak tests enclosed.

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

# CLOSEOUT DIAGRAM

Heart and Vascular Institute  
 2421 Monroe Street  
 Dearborn, MI



Ground below, offices above





**Sealed Source Leak Test**

Licensee: Heart and Vascular Institute-Dearborn

Date: 11/17/17

Performed by: Cari Dzanbazoff

Nuclide	Type	Calibration		Location	M/N	S/N
		Activity	Date			
Cs-137	Vial	198.4 uCi	08/01/05	Hot Lab	IPL	1124-31-15
		Current Activity: 149.32uCi				
Ba-133	Vial	261 uCi	02/01/06	Hot Lab	IPL	1159-70-4
		Current Activity: 120.02uCi				
Co-57	Flood	7.5 mCi	10/01/17	Hot Lab	MED3727	1969051
		Current Activity: 6.65mCi				
Co-57	Flood	10 mCi	12/08/13	Hot Lab	BM05-10	BM05101331210
		Current Activity: 0.251mCi				

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





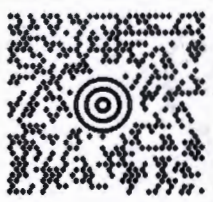
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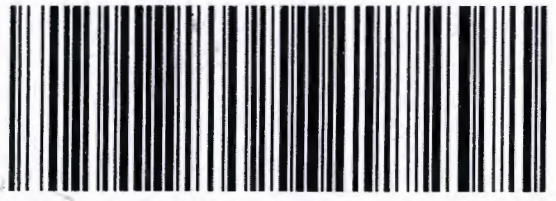


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