




A SERVICE OF  MUNSON MEDICAL CENTER

March 17, 2011

**UNITED STATES NUCLEAR REGULATORY COMMISSION**

Region III, Materials Licensing Section  
2443 Warrenville Road  
Suite 210  
Lisle, IL 60532-4352

Re: Amendment of NRC License No. 21-26531-01  
Close out survey

Dear Sir/Madam:

We wish to provide the following information, in an effort to amend our NRC license.

**Item #1:** Please find the enclosed closeout survey for the following location of use on our license.

1221 Sixth Street  
Suite 204  
Traverse City, 49684


**Areas of Use to be closed out:** Camera Room and, Hot Lab

Please note the following:

- A close-out survey and wipe test was performed on March 9, 2011. The data is enclosed for your review.
- A map of the area(s) noted above keyed to the survey and wipe test data.
- The last date of use of byproduct material was January 11, 2011.
- The following radionuclide(s) (Sealed) Cs-137, Ba-133 and Unsealed Tc99m, Tl-201 were used at this facility.
- All residual byproduct material to include waste was fully decayed in storage and disposed, returned to supplier or transferred to an authorized user.
- A current copy of the sealed source leak test results for the sealed sources used at our facility are enclosed for your review.

RECEIVED APR 01 2011



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This facility is exempt from decommissioning due to low volumes and short physical half-lives of materials used. We did not dispose of radioactive materials by release to sewers or incineration. In addition, there were no spills of any long-lived radioactive material or on-site burials of radioactive materials.

If you have any questions, please contact our physicist James M. Botti, MS by phone at (734) 662-3197 or by email at [jbotti@mpcphysics.com](mailto:jbotti@mpcphysics.com).

Respectfully Yours,

A handwritten signature in black ink, appearing to read "Michael Schulte, MD". The signature is fluid and cursive.

Michael Schulte, MD  
Radiation Safety Officer

Enclosures



### Sealed Source Inventory

Licensee: Great Lakes Cardiology, PC

Date: 12/14/10

Performed by: James Botti

		Calibration				
Nuclide	Type	Activity	Date	Location	M/N	S/N
Current Activity:						
Cs-137	Vial	201.6 uCi	10/01/04	Hot Lab	RV137200U	1074-59-11
Current Activity: 174.68 uCi						
Ba-133	Vial	260.9 uCi	11/01/04	Hot Lab	RV133250U	1074-42-5
Current Activity: 175.78 uCi						

### SEALED SOURCE AMBIENT EXPOSURE SURVEY

Meter:

Max Reading:

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



### Sealed Source Leak Test

Licensee: Great Lakes Cardiology, PC

Date: 12/14/10

Performed by: James Botti

Nuclide	Type	Calibration	Calibration	Location	M/N	S/N
		Activity	Date			
Cs-137	Vial	201.6 uCi	10/01/04	Hot Lab	RV137200U	1074-59-11
Current Activity: 174.68uCi						
Ba-133	Vial	260.9 uCi	11/01/04	Hot Lab	RV133250U	1074-42-5
Current Activity: 175.78uCi						

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

**Date performed:** March 9, 2011

**Performed by:** Dave Ingraham, CNMT

**Comments:** Sealed sources and radioactive trash were removed from these areas prior to survey and wipe testing.

### Instruments

Wipe tests analyzed with a Captinec CRC-15W Well Counter #171150

Instrument: Well Counter

Radionuclide:	<u>Cs-137</u>	MDA for Cs-137	<u>308 dpm's</u>
Date completed:	<u>08/26/09</u>	Conversion factor:	<u>6.36pm/dpm</u>

Area survey performed with the following survey meter:

Manufacturer:	<u>Ludlum</u>
Type:	<u>GM</u>
Model Number:	<u>14C</u>
Serial Number:	<u>210098</u>
Probe Model:	<u>End Window</u>
Annual Calibration Due:	<u>06/21/11</u>

Battery check acceptable:	<u>YES</u>
Operational check acceptable:	<u>N/A</u>
Constancy check acceptable:	<u>YES</u>
Current reading:	<u>2.0 mR/hr</u>

### Radionuclides Used

#### Unsealed

Tc99m, TI-201

#### Sealed

Ba-133, Cs-137

**Last date of byproduct radiopharmaceutical use:**

January 11, 2011

**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:** Sealed Source Leak tests demonstrated no removable contamination.

**Leaking Sources:** There is no history of leaking sources at this facility.

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

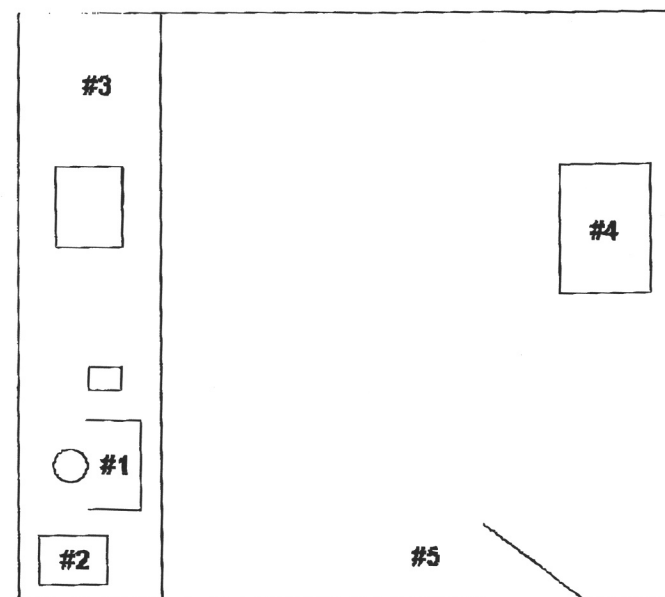
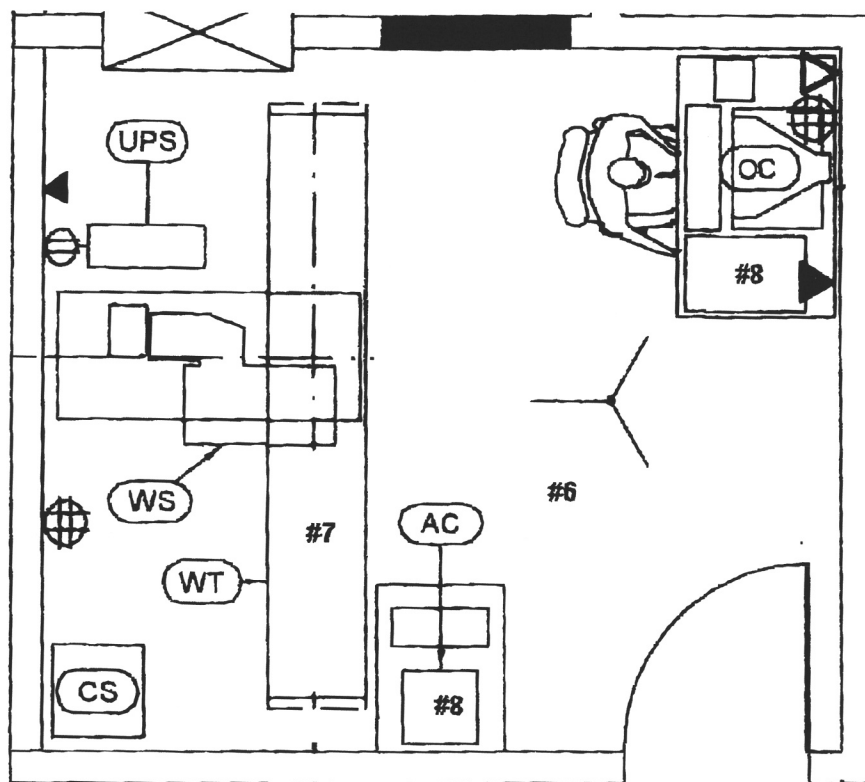
**Removable Contamination:** No area within the department demonstrated removable contamination excess of 18 dpm's.

***Hot Lab, Imaging Area and Stress Rooms***

Background: 428 cpm's

Area	Result in dpms
#1 Dose Prep	0
#2 Waste Storage	18
#3 Package Receipt	10
#4 Injection Chair	0
#5 Hot Lab Floor	8
#6 Imaging Room Floor	7
#7 Camera	0
#8 Acq/Processing Area	5
#9 Treadmill	0
#10 Treadmill Floor	9

***Maximum removable contamination = 18 dpms***

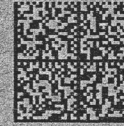


#1= DOSE PREP AREA  
 #2= WASTE STORAGE AREA  
 #3=PACKAGE RECEIPT  
 #4= INJECTION CHAIR  
 #5= HOT LAB FLOOR

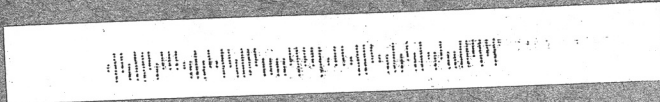
#6= IMAGING ROOM FLOOR  
 #7= CAMERA  
 #8= ACQUISITION CONSOLE. PROCESSING AREA  
 #9= TREADMILL, BED AND FLOOR  
 #10= FREQUENTLY TOUCHED OBJECTS

D. WAWROWICZ  
TRAVERSE HEART & VASCULAR  
1200 SIXTH ST. SUITE 200  
TRAVERSE CITY, MI 49684-2303

ADDRESS SERVICE  
REQUESTED



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