# Michigan Mobile PET-CT Imaging, LLC 861 Downhill Lane Rochester Hills MI, 48370



June 30, 2011

**United States Nuclear Regulatory Commission** 

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

Attention: Sara Forster

RE: Termination of NRC License and Close-out Survey Results

### **NRC License Number:**

Dear Ms. Forster:

Item #1: We wish to terminate our NRC license # 21-32790-01. We have enclosed a NRC Form 314 for your review.

### Item #2: Please find the attached documents:

- Closeout Survey
- Sealed Source Leak Test
- Sealed Source Inventory
- Survey Meter Calibration Certificate
- Alliance Health Care NRC License
- · Facility Diagram of Trailer

### Please note the following:

- A close-out survey and wipe test was performed on June 27, 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 June 27, 2011.
- The following radionuclide(s) (Sealed) Ge-68 and Co-57 and Unsealed F-18 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.

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.

RECEIVED JUL 01 2011

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.

Respectfully Yours,

Mary Martin (Modify as Needed) Executive Management

MayDactin

**Enclosures** 

NRC FORM 314 U.S. NUCLEAR REGULATORY COMMISSION (12-2010) 10 CFR 30 36(j)(1), 40 42(j)(1): 70 38(j)(1), and 72.54(k)(5)(1)(1)	APPROVED BY OMB: NO. 3150-0028 EXPIRES: 10/31/2013 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 Information.
CERTIFICATE OF DISPOSITION OF MATERIALS	Services 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, NEOB-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	LICENSE NUMBER DOCKET NUMBER
Michigan Mobile PET-CT Imaging, LLC	21-32790-01
861 Downhill Lane	LICENSE EXPIRATION DATE
Rochester Hills MI, 48370	05/31/2020
A. LICENSE STATUS (Check the This license has expired. ✓ This license has not yet expired; please	
B. DISPOSAL OF RADIOACT	
(Check the appropriate boxes and complete as necessary. If additional space is real The licensee, or any individual executing this certificate on behalf of the license.	needed, provide attachments)
1. No radioactive materials have ever been procured or possessed by	the licensee under this license.
<ul> <li>✓ 2. All activities authorized by this license have ceased, and all radioact under this license number cited above have been disposed of in the</li> <li>✓ a. Transfer of radioactive materials to the licensee listed below:         Alliance Health Care Service Inc. 47-25570-01     </li> </ul>	
√ b. Disposal of radioactive materials:	
<ul><li>1. Directly by the licensee:</li><li>Decay in Storage.</li></ul>	
2. By licensed disposal site:	
3. By waste contractor:	
<ul> <li>c. All radioactive materials have been removed such that any remain Part 20, Subpart E, and is ALARA.</li> </ul>	ning residual radioactivity is within the limits of 10 CFR
C. SURVEYS PERFORMED A	ND REPORTED
<ol> <li>1. A radiation survey was conducted by the licensee. The survey confire</li> </ol>	ms:
√ 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:
<ol><li>A radiation survey is not required as only sealed sources were ever p</li></ol>	E CONTRACTOR DE CONTRACTOR
✓ 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 James M. Botti RSO  Mail all future correspondence regarding this license to	TELEPHONE (Include Area Code) E-MAIL ADDRESS 810-599-8817 jbotti@mpcphysics.com
3990 JOHN R ST., DUTROIT, HI 48701	ICIA
C. CERTIFYING OFF I CERTIFY UNDER PENALTY OF PERJURY THAT THE	
PRINTED NAME AND TITLE SIGNATURE MARY MARTIN CORP U.F. RADIOLOGY MICHAEL	Martin PATE 7-1-11
WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL ANDIOF SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECT. 1 WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY	8 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A

### **Close-out Survey**

Date performed: June 28, 2011

Performed by: Justin Johnson, 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 # 172026

Instrument: Well Counter

Radionuclide:

Cs-137

MDA for Cs-137

590 dpm's

Date completed:

02/25/10

Conversion factor: 6.2 dpm/dpm

Area survey performed with the following survey meter:

Manufacturer:

Ludlum

Type:

GM

Model Number:

14C

Serial Number:

251798

Probe Model: Annual Calibration Due:

Pancake 05/09/12

YES

Battery check acceptable: Operational check acceptable:

N/A

Constancy check acceptable:

YES

Current reading:

1.25 mR/hr

Radionuclides Used

### Unsealed

F-18

### Sealed

Co-57 and Ge-68

Last date of byproduct radiopharmaceutical use:

June 27, 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 0 dpm's.

# Hot Lab and Imaging Area

Background: 428 cpm's

Area	Result in dpms
#1 Dose Prep	0
#2 Waste Storage	0
#3 Package Receipt	0
#4 Injection Chair	0
#5 Hot Lab Floor	0
#6 Control Room Floor	0
#7 Control Room Counter	0
#8 Scanner Table	0
#9 Scanner Room Floor	0
#10 Frequent Touched Objects	s 0

Maximum removable contamination = 0 dpms

If you have any questions or require additional information, please contact me at 734-662-3197 or by email at jbotti@mpcphysics.com.

James M. Botti, MS Radiological Physicist

Board Certified, ABR, ABMP

**Enclosures** 



# Sealed Source Leak Test

Licensee: Michigan Mobile PET-CT, LLC

Date: 04/28/11

Performed by: James Botti

Calibration Calibration

	Туре	Activity	Date	Location	M/N	S/N
Ge-68	Cal Sour	1.49 mCi		Hot Lab	HEGL-0132	G2-213
Current Ac	tivity: 0.27	9mCi				
Co-57	Vial	5382 uCi	03/01/08	Hot Lab	RV-057-5M	1288-17-3
Current Ac	tivity: 281.8	2uCi				

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 2.0 x 10 -4 uCi Cs-137 145 counts/1 min 8.8 x 10<sup>-5</sup> uCi Ba-133 204 counts/1 min Co-57 53 counts/1 min

RADIATION SAFETY OFFICER

Sealed Source Leak Test Page 1



# Sealed Source Inventory

Licensee: Michigan Mobile PET-CT, LLC

Date: 04/28/11

Performed by: James Botti

Calibration

 Nuclide
 Type
 Activity
 Date
 Location
 M/N
 S/N

 Ge-68
 Cal Sour
 1.49 mCi
 06/01/09
 Hot Lab
 HEGL-0132
 G2-213

Current Activity: 0.279 mCi

Co-57 Vial 5382 uCi 03/01/08 Hot Lab RV-057-5M 1288-17-3

Current Activity: 281.82 uCi

SEALED SOURCE AMBIENT EXPOSURE SURVEY

Meter:

Max Reading:

RADIATION SAFETY OFFICER:

Sealed Source Inventory Page 1



Facility:

Michigan Mobile PET-CT, LLC

3711 Elmhurst

Toledo

OH 43613

Instrument:

Manufacturer: Ludium

Type:

GM

Model #:

140

Serial #:

240290

Probe Type: Probe Serial #: 251798

Pancake

Calibration Geometry: Probe perpendicular to source, pan facing away

Calibration Source:

Cs-137 calibrated on 10/1/07 (+/- 3% NBS). Exposure Rate on 10/1/07; 59.1 mR/h

at 1 meter. (NRC License No. 21-20153-01)

Calibration Data:

Scale	Exposure mR/h	Reading mR/h	Exposure mR/h	Reading mR/h	Correction Factor
×Q.1	0.06	0.065	0.13	0.125	1.0
×1	0.6	0.6	1.3	1.25	1.0
x10	6	6	13	13	1.0
x100	60	60	130	130	1.0
×1000	300	300	700	700	1.0

Date Received:

5/2/2011

Date Calibrated:

5/9/2011

Source to pancake window, dap off.

Check Source Reading: Battery Check: 1.25 mR/h

Bat. Ok

High Voltage:

908 Volts

Repairs:

None

Comments:

All instrument readings are within +/- 10% for all scales used.

Drift check was acceptable. Please note applicable scale correction

factors in order to obtain accurate readings in mR/h.

Note: This instrument must be checked for proper operation with its dedicated check source prior to use. A reading as described above denotes proper operation.

Calibrated by:

(317) 581-1911

Ryan Dzanbazo

11967

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

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

4806 Mile High Drive Salt Lake City, UT 84124 (801) 272-2952 Office & Fax N7375 Crystal Ridge Drive Beaver Dam, W1 53916 (920) 885-9872 Fax (920) 885-9870



# Well Counter and Uptake Probe Instrument Evaluation

Licensee: Michigan Mobile PET-CT, LLC

Date:

04/28/11

Model #: Caprac

Instrument ID:

Hot Lab

Serial #: 172026

Installation Date:

10/01/07

Instrument: Carprac Well

FWHM evaluated and acceptable:

N/A

Chi-square reproducibility evaluated and acceptable:

N/A

Energy Calibration evaluated and acceptable:

04/28/11

YES

Radiation Detection Efficiency:

Radionuclide:

Cs-137

MDA for Cs-137:

590.0 dpm

Date Completed:

02/25/10

Conversion Factor:

6.2 dpm/cpm

Radionuclide:

MDA for

Date Completed:

Conversion Factor:

Wipe Testing:

Generic Conversion Factor:

5.0 dpm/cpm

Surface Contamination Trigger Levels

Restricted Areas:

2000.0 dpm/100 cm^2

**Unrestricted Areas:** 

200.0 dpm/100 cm^2

Package Receipt:

2000.0 dpm/300 cm^2

# & ALLIANCE HEALTHCARE SERVICES

June 30, 2011

Jim Botti Radiation Safety Officer

Dear Mr. Botti,

Attached is a copy of the Alliance HealthCare Services (AHCS) Nuclear Regulatory Commission License.

AIICS has possession and accepts the listed radioactive sealed sources.

Please let me know if you need additional information.

Michael Culley MS CNMT Radiation Safety Officer NRC FORM 374

#### U.S. NUCLEAR REGULATORY COMMISSION

PAGE 1 OF 6 PAGES Amendment No. 8

#### **MATERIALS LICENSE**

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10. Code of Federal Regulations. Chapter 1, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified heliow.

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01
o read as follows:
1, 2011
mum amount that licensee may ess at any one time under this se
eeded

#### a. Authorized use.

A. Any imaging and localization study permitted by 10 CFR 35.200.

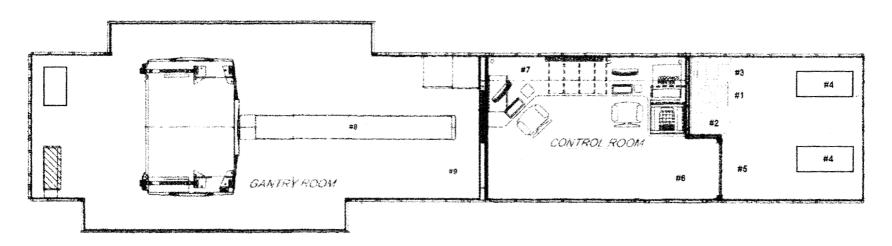
### CONDITIONS

10. Licensed material may be used or stored incident to mobile nuclear medicine activities at temporary job sites of the licensee anywhere in the United States where the U. S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material, including areas of exclusive Federal jurisdiction within Agreement States.

If the jurisdiction status of a Federal facility within an Agreement State is unknown, the licensee should contact the Federal agency controlling the job site in question to determine whether the proposed job site is an area of exclusive Federal jurisdiction. Authorization for use of radioactive materials at job sites in Agreement States not under exclusive Federal jurisdiction shall be obtained from the appropriate state regulatory agency.

- 11. Licensed material is only authorized for use by, or under the supervision of:
  - A. Individuals permitted to work as an authorized user in accordance with 10 CFR 35.13 and 35.14.

# Area Diagram for Daily Area Surveys and Weekly Wipe Testing Michigan Mobile PET-CT, LLC



#1= DOSE PREP AREA

**#2= WASTE STORAGE AREA** 

**#3= RADIOACTIVE PACKAGE RECIEPT** 

#4= INJECTION CHAIR

#5= HOT LAB FLOOR

#6= CONTROL ROOM FLOOR

**#7= CONTROL ROOM COUNTER** 

**#8= SCANNER TABLE** 

#9= SCANNER ROOM FLOOR

**#10= FREQUENTLY TOUCHED OBJECTS** 

### Forster, Sara

From:

Cupp, Judy [JCUPP@dmc.org] Friday, July 01, 2011 9:13 AM

Sent: To:

Forster, Sara

Subject:

FW: Email from DMC MFP

Attachments:

document2011-07-01-095645.pdf

Importance:

High

Ms. Forster...re-sending the documents referenced below. Thank you and please call me if you need any further information.

Judy Cupp Executive Administrative Assistant to Mary L. Zuckerman, Executive VP and Chief Operating Officer

Mary Martin, B.A., M.P.A. Corporate Vice President Performance Improvement & Radiology

313-745-1246 (phone) 313-966-7569 (fax) jcupp@dmc.org

----Original Message----

From: Cupp, Judy

Sent: Friday, July 01, 2011 10:08 AM

To: 'sarah.forster@nrc.gov' Cc: Martin, Mary (Palazzolo) Subject: FW: Email from DMC MFP

Importance: High

Attached are signed documents related to NRC License.

----Original Message----

From: m646e@dmc.org [mailto:m646e@dmc.org]

Sent: Friday, July 01, 2011 9:57 AM

To: Cupp, Judy

Subject: Email from DMC MFP

Please read and respond as appropriate.