

## Radiological Physics Service, Inc.

3839 Napier Road  
Plymouth, MI 48170  
(734) 455-4730  
Fax: (734) 453-8851

### PHYSICISTS:

#### MICHIGAN

*Ray A. Carlson, M.S.*  
Cell: (734) 395-7361  
rayacarson@att.net

*Laura T. Smith, M.S.*  
Cell: (586) 215-5947  
LSphysics@att.net

*Vincent McCormick, M.S.*  
Cell: (737) 395-9323  
v\_mccormick@comcast.net

*Matt Buczek, M.S.*  
Cell: 586-855-2132  
inatt.buczek@gmail.com

#### GEORGIA

*Diane Griffiths, M.S.*  
Cell: (770) 355-7709  
dianegriffiths@comcast.net

June 10, 2016

William Reichold  
USNRC, Region III  
2443 Warrenville Road, Suite 210  
Lisle, IL 60532-4352

Dear Mr. Reichold,

I am writing to inform you of the close-out survey I performed on the old imaging room/hot lab at the Medical Clinic of Northville on June 7, 2016. Please find the survey results attached.

Prior to the survey, all radioactive materials were removed from the "old" imaging room and moved to the "new" imaging room/hot lab. All sealed sources were inventoried and leak tested after their move to the new location. See attached sealed source inventory and leak test.

The radionuclides used in this location over the years included Tc-99m, Tl-201, In-111.

After all radioactive materials were removed from the old imaging room/hot lab, the room was divided into 29 areas. See attached diagram. Each area was slowly surveyed with a recently calibrated GM survey meter (3/26/2016). After carefully surveying each area, a wipe test of 100 cm<sup>2</sup> was performed and counted on the Caprac well counter, last evaluated the same day. A Co-57 efficiency was determined to be 86%. A conversion factor of 2 was used to convert the net cpm to dpm. No areas above background were found with the GM survey and no areas exceeding 200 dpm/100 cm<sup>2</sup> were found with the wipe tests.

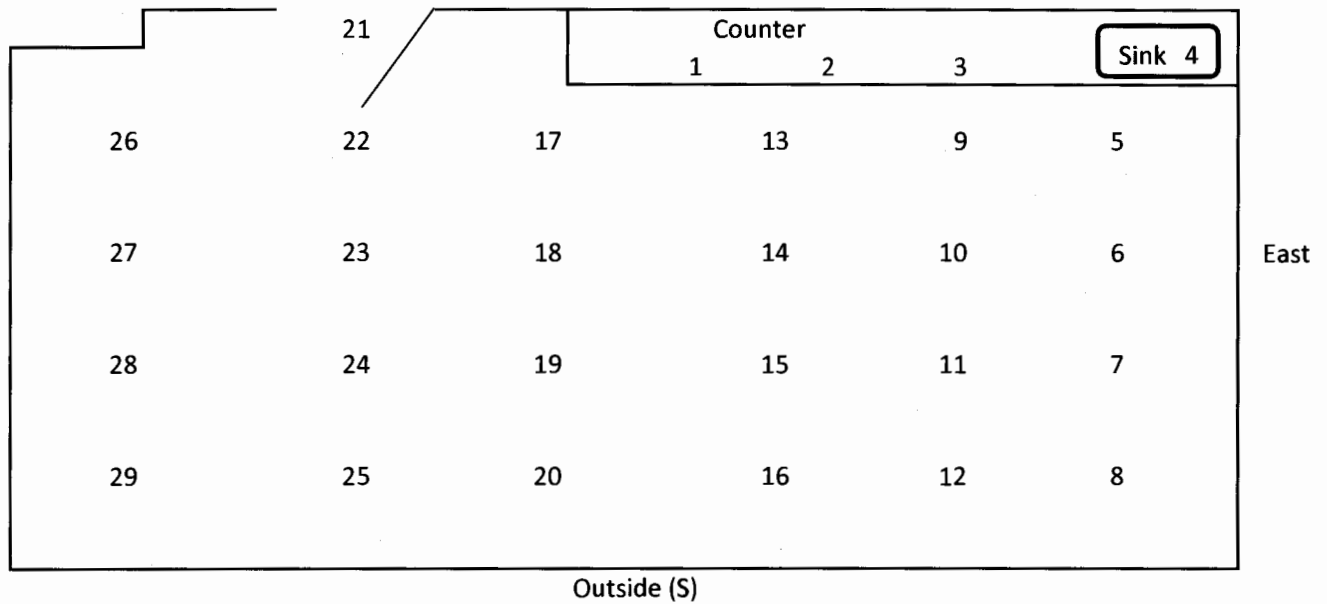
The "old" imaging room/hot lab were released for unrestricted use.

If you have any questions regarding the close-out survey performed at this facility, feel free to give me a call at (734)395-9323.

Sincerely,

Vincent McCormick, M.S., DABR  
Certified Medical Physicist

Medical Clinic of Northville  
 308 South Main, Northville, MI 48167  
 License # 21-32174-01



Decommissioning of Imaging Room/Hot Lab  
 June 7, 2016

Area	Location	mR/h	net dpm	Area	Location	mR/h	net dpm
1	Counter Left	0.02	10	16	Floor - Center	0.02	0
2	Counter Center L	0.02	0	17	Floor - Center	0.02	0
3	Counter Center R	0.02	0	18	Floor - Center	0.02	0
4	Sink	0.02	0	19	Floor - Center	0.02	0
5	Floor - East	0.02	0	20	Floor - Center	0.02	0
6	Floor - East	0.02	0	21	Floor - Center West	0.02	0
7	Floor - East	0.02	0	22	Floor - Center West	0.02	0
8	Floor - East	0.02	0	23	Floor - Center West	0.02	0
9	Floor - Center East	0.02	0	24	Floor - Center West	0.02	0
10	Floor - Center East	0.02	0	25	Floor - Center West	0.02	0
11	Floor - Center East	0.02	0	26	Floor - West	0.02	0
12	Floor - Center East	0.02	0	27	Floor - West	0.02	10
13	Floor - Center	0.02	46	28	Floor - West	0.02	0
14	Floor - Center	0.02	16	29	Floor - West	0.02	20
15	Floor - Center	0.02	0		Background	0.02	0

Survey meter: Ludlum 14C, SN 59932, Thin End Window, Last Calibrated on 3/26/2016

Well Counter: Capintec, Caprac, SN 1085, Last tested 6/7/2016, Efficiency (Co-57) 86%

Surveys performed by Vincent McCormick, M.S., DABR, consulting medical physicist

**Location:** Medical Clinic of Northville

**Date of Inspection:** June 7, 2016

**SEALED SOURCE INVENTORY**

NUCLIDE	TYPE	LOCATION	CALIBRATION		CALIBRATION			
			ACTIVITY	DATE	MFGR	M/N	S/N	
Cs-137	Vial	Hot Lab	217	uCi	2/25/1992	Dupont		S356022-040
Ba-133	Vial	Hot Lab	276.4	uCi	6/1/1981	Amersham	BDCVI	2087MA
Cs-137	Rod	Hot Lab	0.5	uCi		E & Z		
Co-57	Sheet	Hot Lab	10	mCi	5/1/2013	E & Z	NES392	1665-140
Co-57	Sheet	Hot Lab	10	mCi	11/1/2010	E & Z	NES392	1457-008

RSO: \_\_\_\_\_

**SEALED SOURCE LEAK TEST**

NUCLIDE	TYPE	LOCATION	CALIBRATION		CALIBRATION			
			ACTIVITY	DATE	MFGR	M/N	S/N	
Cs-137	Vial	Hot Lab	217	uCi	2/25/1992	Dupont		S356022-040
Ba-133	Vial	Hot Lab	276.4	uCi	6/1/1981	Amersham	BDCVI	2087MA
Co-57	Sheet	Hot Lab	10	mCi	5/1/2013	E & Z	NES392	1665-140

**COMMENT:** The sources listed above were leak tested using a wipe technique and were found to have less than 0.005 uCi removable activity.

**TESTED BY:** Vincent McCormick, M.S.

**DATE:** June 7, 2016

RSO: \_\_\_\_\_



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION III  
2443 WARRENVILLE RD. SUITE 210  
LISLE, IL 60532-4352

Won Chae, M.D.  
Radiation Safety Officer  
Medical Clinic of Northville  
308 S. Main Street  
Northville, MI 48167

Dear Dr. Chae:

Enclosed is Amendment No. 2 amending your NRC Material License No. 21-32174-01 in accordance with your request. Please note that the changes made to your license are printed in **bold font**.

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region III office at (630) 829-9887 so that we can provide appropriate corrections and answers.

Please note, we have removed the license condition regarding decommissioning financial assurance because this condition no longer applies to your licensed activities.

Please submit a copy of your close-out "old" nuclear medicine department. The survey should consist of exposure rate measurements to show that all sources of radioactive material have been removed, and contamination checks of areas where radioactive materials were used or stored. Average radiation levels associated with surface contamination and removable contaminations should not exceed those specified in the enclosed decontamination guide. Please submit the following information with your close-out survey:

- a. A history of all radionuclides used in your "old" nuclear medicine department.
- b. A current copy of the leak test results for the sealed sources used in your "old" nuclear medicine department. Also a history of leaking sealed sources (if any).
- c. A diagram of your "old" nuclear medicine department with survey and wipe test results keyed to specific locations. Please record your survey results using the appropriate units as described in 10 CFR 30.36 (j) (2) (i) (copy enclosed).
- d. The name of the person performing the survey.
- e. The date the survey was performed.
- f. The instrument(s) used for exposure rate measurements and for analysis of the wipes.
- g. Background readings.
- h. The date that the survey instrument was last calibrated.

**REQUEST FOR CLOSE-OUT  
SURVEY**

W.Chae

- i. Confirm that all radioactive waste has been decayed to background radiation or has been transferred to the "new" nuclear medicine department for decay and disposal. Also, please specify the final disposition of the sealed sources. Such as the sealed sources were transferred to the "new" nuclear medicine department.

You will be periodically inspected by NRC. Failure to conduct your program in accordance with NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC will result in enforcement action against you. This could include issuance of a notice of violation, or imposition of a civil penalty, or an order suspending, modifying or revoking your license as specified in the General Statement of Policy and Procedure for NRC Enforcement Actions. Since serious consequences to employees and the public can result from failure to comply with NRC requirements, prompt and vigorous enforcement action will be taken when dealing with licensees who do not achieve the necessary meticulous attention to detail and the high standard of compliance which NRC expects of its licensees.

The NRC's Safety Culture Policy Statement became effective in June 2011. While a policy statement and not a regulation, it sets forth the agency's *expectations* for individuals and organizations to establish and maintain a positive safety culture. You can access the policy statement and supporting material that may benefit your organization on NRC's safety culture Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/safety-culture.html>. We strongly encourage you to review this material and adapt it to your particular needs in order to develop and maintain a positive safety culture as you engage in NRC-regulated activities.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Sincerely,

William P. Reichhold  
Materials Licensing Branch

License No. 21-32174-01  
Docket No. 030-35012  
Enclosure: Amendment No. 2  
Decontamination Guide

## Reichhold, William

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**From:** Vince McCormick <v\_mccormick@comcast.net>  
**Sent:** Wednesday, June 15, 2016 3:03 PM  
**To:** Reichhold, William  
**Cc:** 'Wendy Boufford'; 'Kimberly Larsen'  
**Subject:** [External\_Sender] Docket No. 030-35012  
**Attachments:** MedClinicNorthvilleCloseout6\_16.pdf

**Categories:** Red Category

Mr. Reichhold,

Attached please find the close-out survey documentation for Medical Clinic of Northville, under license # 21-32174-01, amendment 2.

If you have any questions, please give me a call at (734)395-9323.

Thanks,

Vince

Vincent McCormick, M.S., DABR  
Radiological Physics Service, Inc.  
Mobile: (734)395-9323  
Fax: (248)862-6599