

March 9, 2010

Bill Reichhold  
 U. S. Nuclear Regulatory Commission  
 Materials Licensing Section  
 2443 Warrenville Road, Suite 210  
 Lisle, IL 60532-4352

**Control Number: 318672**

Dear Mr. Reichhold:

Saint Joseph Regional Medical Center would like to amend its Byproduct Materials License, Number 13-02650-02, to **remove 801 East LaSalle Street, South Bend, Indiana as an Address of Use**. Enclosed are close-out surveys for the nuclear medicine department, cesium-137 source storage, and low level radioactive waste areas, as previously identified on our license. Close-out surveys for the cesium-137 source storage and low level radioactive waste area were previously submitted. The close-out of the nuclear medicine department is being submitted for the first time in order to remove the 801 East LaSalle Street address completely.

In regards to the Request for Additional Information, dated January 7, 2010:

1. A complete history of the cesium-137 source storage area is unknown. It is known that cesium-137 brachytherapy sources were stored in this area. The storage of other isotopes is unknown. The low level radioactive waste area was used to store nuclear medicine wastes such as iodine-131 and technetium-99m.
2. At the time of the close-out surveys, no sealed sources were being stored in either the cesium-137 source storage or low level radioactive waste area. All sealed sources were disposed of prior to the close-out surveys. No sealed sources were leaking at the time of the disposal.

Saint Joseph Regional Medical Center  
 5215 Holy Cross Parkway  
 Mishawaka, IN 46545  
 (574) 335-5000

Plymouth Campus  
 1915 Lake Avenue  
 Plymouth, IN 46563  
 (574) 936-3181

Elm Road Medical Campus  
 60101 Bodnar Boulevard  
 Mishawaka, IN 46544

Saint Joseph Pediatric Specialty Clinics  
 611 East Douglas Road, Suite 405  
 Mishawaka, IN 46545  
 (574) 335-6240

Saint Joseph Physician Network  
 810 East Park Place  
 Mishawaka, IN 46545  
 (574) 472-6700

Saint Joseph Regional Medical Center  
 Rehabilitation Institute  
 60205 Bodnar Boulevard  
 Mishawaka, IN 46544  
 (574) 335-8800

Saint Joseph Urgent Care  
 53830 Generations Drive, Suite 110  
 South Bend, IN 46635  
 (574) 472-6333

The Foundation of  
 Saint Joseph Regional Medical Center  
 837 East Cedar Street, Suite 350  
 South Bend, IN 46617  
 (574) 237-7377

Saint Joseph Administrative Offices  
 837 East Cedar Street, Suite 350  
 South Bend, IN 46617  
 (574) 335-5000

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3. The survey meter that was used for close-out of the cesium-137 source storage area and low level radioactive waste area was calibrated on 6/12/09. Please note that a different survey meter was used to close-out the nuclear medicine department. The calibration information for the survey meter used to close-out nuclear medicine is included in the close-out survey.
4. We confirm that all radioactive waste of half-lives less than 120 days was decayed to background radiation levels and disposed of as normal trash. Further, we confirm that all sealed sources were transferred to an authorized radioactive waste broker for disposal.

Should there be any questions concerning this license amendment request, please contact our Radiation Safety Officer, Mr. Patrick Byrne, DABR, CHP, DABSNM, at 1-877-317-5811.

Sincerely,

A handwritten signature in cursive script, appearing to read "Chris Karam".

Christopher Karam  
Vice President, Clinical Services

/dmc

## Removable Contamination Survey Results

Wipe samples were counted in a CAPTUS 3000 Well Counter (s/n: 900271) The efficiency of this system for Cobalt-57 is 2.5 dpm/cpm.

Background: 485.2 counts per minute

### IMAGING ROOM #1

Wipe Number	Gross counts per minute	Net counts per minute	Disintegrations per minute
1	497	11.8	29.5
2	497	11.8	29.5
3	497	11.8	29.5
4	487	1.8	4.5
5	487	1.8	4.5
6	487	1.8	4.5
7	503	17.8	44.5
8	503	17.8	44.5
9	503	17.8	44.5
10	511	25.8	64.5
11	511	25.8	64.5
12	511	25.8	64.5
13	501	15.8	39.5
14	501	15.8	39.5
15	501	15.8	39.5
16	501	15.8	39.5

\*Please refer to the attached survey map for wipe locations.

IMAGING ROOM #2

Wipe Number	Gross counts per minute	Net counts per minute	Disintegrations per minute
1	483	-2.2	0
2	483	-2.2	0
3	483	-2.2	0
4	537	51.8	129.5
5	537	51.8	129.5
6	537	51.8	129.5
7	512	26.8	67
8	512	26.8	67
9	512	26.8	67
10	475	-10.2	0
11	475	-10.2	0
12	475	-10.2	0
13	491	5.8	14.5
14	491	5.8	14.5
15	491	5.8	14.5
16	491	5.8	14.5

\*Please refer to the attached survey map for wipe locations.

IMAGING ROOM #3

Wipe Number	Gross counts per minute	Net counts per minute	Disintegrations per minute
1	470	-15.2	0
2	470	-15.2	0
3	470	-15.2	0
4	487	1.8	4.5
5	487	1.8	4.5
6	487	1.8	4.5
7	498	12.8	32
8	498	12.8	32
9	498	12.8	32
10	476	-9.2	0
11	476	-9.2	0
12	476	-9.2	0
13	489	3.8	9.5
14	489	3.8	9.5
15	489	3.8	9.5
16	489	3.8	9.5

\*Please refer to the attached survey map for wipe locations.

### HOT LAB

Wipe Number	Gross counts per minute	Net counts per minute	Disintegrations per minute
1	491	5.8	14.5
2	491	5.8	14.5
3	491	5.8	14.5
4	505	19.8	49.5
5	505	19.8	49.5
6	505	19.8	49.5
7	484	-1.2	0
8	484	-1.2	0
9	484	-1.2	0
10	447	-38.2	0
11	447	-38.2	0
12	447	-38.2	0
13	467	-18.2	0
14	467	-18.2	0
15	467	-18.2	0
16	467	-18.2	0

\*Please refer to the attached survey map for wipe locations.

### INJECTION AREA

Wipe Number	Gross counts per minute	Net counts per minute	Disintegrations per minute
1	478	-7.2	0
2	478	-7.2	0
3	478	-7.2	0
4	498	12.8	32
5	498	12.8	32
6	498	12.8	32

\*Please refer to the attached survey map for wipe locations.

### THYROID UPTAKE AREA

Wipe Number	Gross counts per minute	Net counts per minute	Disintegrations per minute
1	501	15.8	39.5
2	501	15.8	39.5
3	501	15.8	39.5
4	521	35.8	89.5
5	521	35.8	89.5
6	521	35.8	89.5

\*Please refer to the attached survey map for wipe locations.

### STRESS ROOM #1

Wipe Number	Gross counts per minute	Net counts per minute	Disintegrations per minute
1	522	36.8	92
2	522	36.8	92
3	522	36.8	92
4	490	4.8	12
5	490	4.8	12
6	490	4.8	12
7	444	-41.2	0
8	444	-41.2	0
9	444	-41.2	0
10	444	-41.2	0

\*Please refer to the attached survey map for wipe locations.

### STRESS ROOM #2

Wipe Number	Gross counts per minute	Net counts per minute	Disintegrations per minute
1	496	10.8	27
2	496	10.8	27
3	496	10.8	27
4	495	9.8	24.5
5	495	9.8	24.5
6	495	9.8	24.5
7	486	0.8	2
8	486	0.8	2
9	486	0.8	2
10	528	42.8	107
11	528	42.8	107
12	528	42.8	107
13	485	-0.2	0
14	485	-0.2	0
15	485	-0.2	0
16	485	-0.2	0

\*Please refer to the attached survey map for wipe locations.

Maximum removable contamination occurred in the Imaging Room #2 areas 4-6 gross count rate = 537 cpm/100cm<sup>2</sup>. Net count rate (gross minus background) = 537 – 485.2=51.8 cpm/100cm<sup>2</sup>. Net removable disintegrations per minute = 51.8 cpm/100cm<sup>2</sup> x 2.5 dpm/cpm = 129.5 dpm/100cm<sup>2</sup>.

#### Conclusion

As of 12/16/09, all radioactive materials have been removed from the area of use and no removable contamination is present.



Close-out survey of 801 East LaSalle Street, South Bend, Indiana, 46617  
Nuclear Medicine Department

Performed by: Sharon Updike, BA, CNMT, NCT  
Medical Physics Consultants, Inc.

Radioactive materials usage at this address of use was limited to diagnostic and occasionally therapeutic medical procedures in humans, along with the use of sealed sources for equipment calibration and quality control.

Wipe tests for removable radioactive contamination were taken on 12/16/09 and analyzed in a CAPTUS 3000 Well Counter (s/n: 900271). A full spectrum window was used to analyze the wipes. The efficiency of this system for Cobalt-57 is 2.5 dpm/cpm.

The radiation levels survey was performed on 12/16/09 by Sharon Updike, using a Ludlum Model 14C Geiger-Muller survey meter (S/N: 192215) with an end window probe. The meter was calibrated on 01/18/09. The range used for the radiation level survey was 0.0 to 0.2 mR/hr.

Visual Inspection

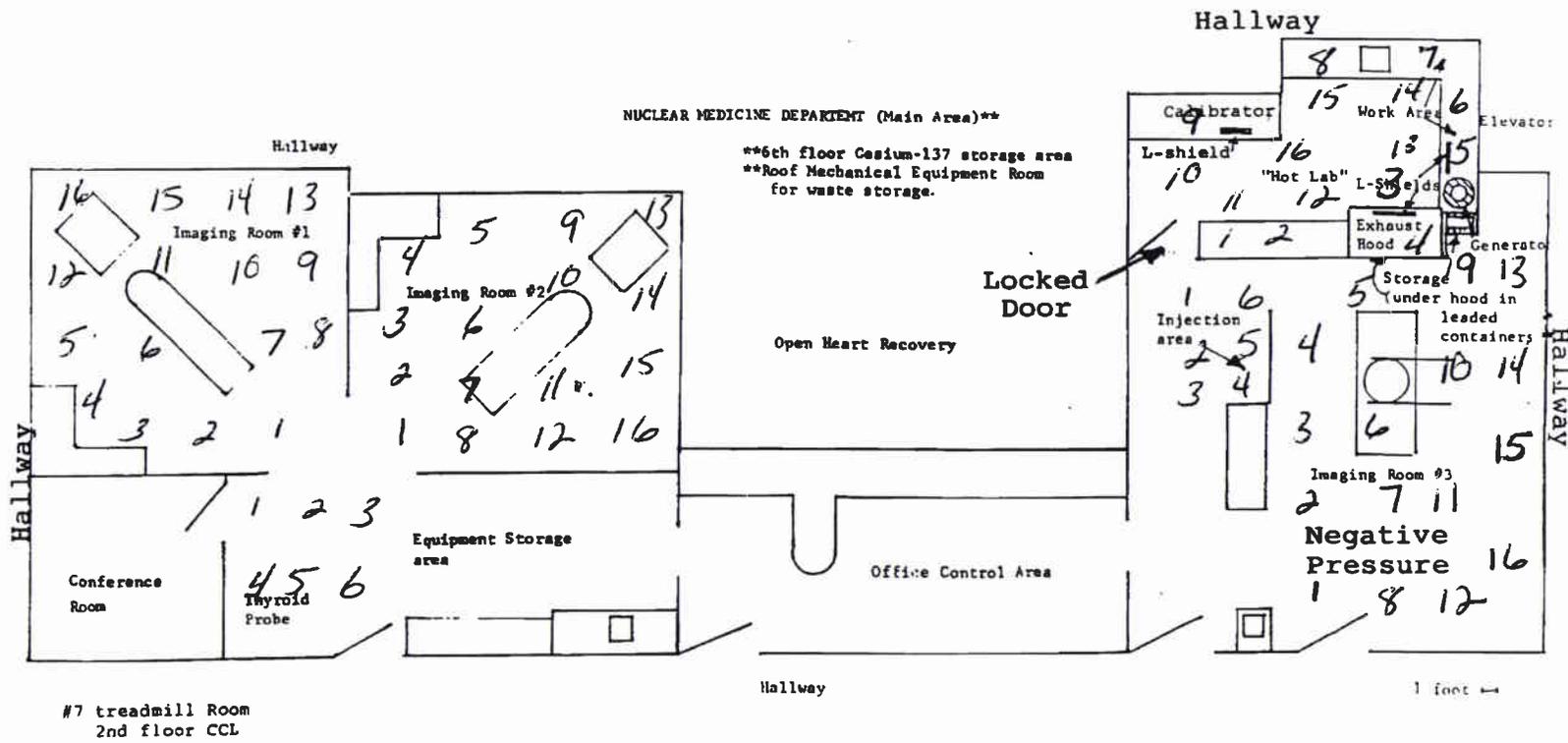
The area was visually inspected to ensure that all radioactive waste had been removed. No radioactive material was located in the area.

Radiation Level Survey

No area demonstrated radiation levels in excess of the background reading of 0.02 mR/hr.

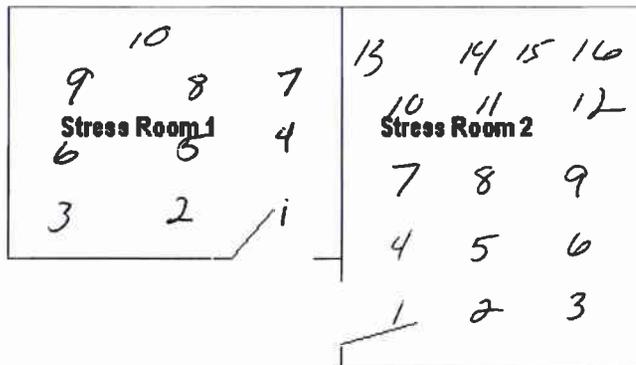
Sealed Sources

All sealed sources have been moved to the 5215 Holy Cross Parkway, Mishawaka, Indiana address of use. No sealed source had ever been found to be leaking. Enclosed is a copy of the results of the last leak tests performed on the sealed sources prior to the move.



ATT 9.1.a

**St. Joseph Regional Medical Center**  
**707 East Cedar Street, Suite 100**  
**South Bend, Indiana 46617**



**Saint Joseph Regional Medical Center**

**License # 13-02650-02**

Closeout Survey of 6th floor Cesium Storage Area

**Date:** 7/30/2009  
**Well Counter:** Capintec CRC15W (s/n 170845)  
**Survey Meter:** Ludlum 14C (s/n 130369)

**Performed By:** Sharon Updike, MPC  
**MDA:** 127 dpm  
**Check Value:** 10 mr/hr

	Background	348 cpm		.02 mR/hr
Wipe	Area	net cpm	net dpm	mR/hr
1	Floor	37.0	41.44	0.02
2	Counter	Less than background	0	0.03
3	Floor	48.0	53.76	0.02
4	Floor	10.00	11.2	0.02
5	Floor	Less than background	0	0.02
6	Floor	14.00	15.68	0.02

**Saint Joseph Regional Medical Center**

**License # 13-02650-02**

Closeout of low-level waste storage area

<b>Date:</b> 8/28/2009	<b>Performed By:</b> Sharon Updike, MPC
<b>Well Counter:</b> Capintec CRC15W (s/n 170845)	<b>MDA:</b> 127 dpm
<b>Survey Meter:</b> Ludlum 14C (s/n 130369)	<b>Check Value:</b> 10 mR/hr

	Background	352 cpm		.02 mR/hr
Wipe	Area	net cpm	net dpm	mR/hr
1	Floor	59.00	66.08	0.02
2	Floor	78.00	87.36	0.03
3	Floor	68.00	76.16	0.02
4	Floor	63.00	70.56	0.02
5	Floor	70.00	78.4	0.02
6	Floor	60.00	67.2	0.02
7	Floor	79.00	88.48	0.02
8	Floor	72.00	80.64	0.02
9	Floor	30.00	33.6	0.02
10	Desk	53.00	59.36	0.03
11	Desk	71.00	79.52	0.02
12	Floor	78.00	87.36	0.02
13	Lead container(blue)	80.00	89.6	0.03
14	Lead container(orange)	74.00	82.88	0.02



**SAINT JOSEPH**  
Regional Medical  
Center

South Bend • Mishawaka • Plymouth

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P.O. Box 1935  
South Bend, Indiana 46634

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