



## Southern Indiana Physicians

September 5, 2017

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

Dear Sir or Madam:

Premier Healthcare, LLC would like to provide additional information (control number 599820) regarding the termination of its Byproduct Materials License, Number 13-32020-01.

1. NRC Form 314 is enclosed for your review.
2. Radioactive materials use at the facility ceased as of the end of the work day on August 31, 2017. Tc-99m unsealed sources (totaling less than 1 Ci max) were used for clinical diagnostic imaging of patients. Sealed sources, including Cs-137, Co-57, and Ba-133, were used for equipment calibration. Please refer to the sealed source inventory for quantities of activity for sealed sources.
3. The licensee no longer possesses any radioactive materials.
4. Final status surveys of the areas of use are enclosed for your review.
5. Sealed source inventory, leak tests, and recipient acknowledgement of receipt of sources are enclosed.
6. All radioactive material disposed of via decay-in-storage has been disposed of in accordance with Title 10 of the Code of Federal Regulations (CFR) 35.92.

If there are any questions concerning this license amendment, please contact Mr. Bryce A. Caudle, at 317-443-9035, by email at [bcaudle@mpcphysics.com](mailto:bcaudle@mpcphysics.com), or by fax at 317-581-1931.

Sincerely,

*K. Fields*

Kay Fields, N.P.  
Chief Operating Officer  
Premier Healthcare, LLC  
550 S. Landmark Avenue  
Bloomington, IN 47403  
812-353-4817

Elizabeth Thompson  
Administrator  
IU Health Southern Indiana Physicians  
Premier Multispecialty Group  
550 S. Landmark Avenue  
Bloomington, IN 47403  
812-353-4817

## CERTIFICATE OF DISPOSITION OF MATERIALS

PLEASE READ THESE INSTRUCTIONS BEFORE COMPLETING NRC FORM 314.

Subpart E of 10 CFR Part 20 establishes the radiological criteria for license terminations/decommissioning of facilities licensed under 10 CFR Parts 30, 40, 50, 60, 61, 70, and 72, as well as other facilities subject to the Commission's jurisdiction under the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, as amended.

### INSTRUCTIONS

#### Section B, Item 2.

Licensees should describe the specific radioactive material transfer actions. If radioactive wastes were generated in terminating this license, the licensee should describe the disposal actions taken, including the disposition of low-level radioactive waste, mixed waste, greater-than-Class-C waste, and sealed sources.

#### Section B, Item 2.a.

The information provided concerning the transfer of radioactive material to another licensee should specify the date of the transfer, the name of the licensee recipient, an individual contact name and telephone number for the licensee recipient, and the recipient's NRC or Agreement State license number.

#### Section B, Item 2.b.

For disposal of radioactive materials, licensees should describe the specific disposal method or procedure (e.g., decay-in-storage). For those cases when radioactive materials are disposed of by a licensed disposal site or by a waste contractor, the licensee should specify the name, address, and telephone number of the licensed disposal site operator or waste contractor.

#### Section B, Item 2.c.

"Residual radioactivity," as defined in 10 CFR 20.1003, means radioactivity in 'areas' (structures, materials, soils, etc.) remaining as a result of activities (licensed and unlicensed) under the licensee's control from sources used by the licensee, excluding background radiation. ALARA is defined in 10 CFR 20.1003.

### FILE CERTIFICATES AS FOLLOWS:

#### IF YOU ARE LOCATED IN:

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND CERTIFICATES TO:

LICENSING ASSISTANT SECTION  
NUCLEAR MATERIALS SAFETY BRANCH  
U.S. NUCLEAR REGULATORY COMMISSION, REGION I  
2100 RENAISSANCE BOULEVARD, SUITE 100  
KING OF PRUSSIA, PA 19406-2713

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND CERTIFICATES TO:

MATERIALS LICENSING SECTION  
U.S. NUCLEAR REGULATORY COMMISSION, REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, IL 60532-4352

#### IF YOU ARE LOCATED IN:

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MISSISSIPPI, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND CERTIFICATES TO:

MATERIAL RADIATION PROTECTION SECTION  
U. S. NUCLEAR REGULATORY COMMISSION, REGION IV  
1600 E. LAMAR BOULEVARD  
ARLINGTON, TX 76011-4511



## CERTIFICATE OF DISPOSITION OF MATERIALS

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 FOIA, Privacy, and Information Collections Branch (1-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to [InfoCollections.Resource@nrc.gov](mailto:InfoCollections.Resource@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NE08-10202, (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

Premier Healthcare, LLC  
550 S. Landmark Ave.  
Bloomington, IN 47403

LICENSE NUMBER

13-32020-01

DOCKET NUMBER

LICENSE EXPIRATION DATE

10/31/2022

**A. LICENSE STATUS (Check the appropriate box)**

- ☐ This license has expired. ☒ This license has not yet expired; please terminate it.

**B. DISPOSAL OF RADIOACTIVE MATERIAL**

(Check the appropriate boxes and complete as necessary. If additional space is needed, provide attachments)

The licensee, or any individual executing this certificate on behalf of the licensee, certifies that:

- ☐ 1. No radioactive materials have ever been procured or possessed by the licensee under this license.
- ☒ 2. All activities authorized by this license have ceased, and all radioactive materials procured and/or possessed by the licensee under this license number cited above have been disposed of in the following manner.
- ☒ a. Transfer of radioactive materials to the licensee listed below:
- Indiana University Health Bedford Hospital, License Number 13-14823-01
- ☐ b. Disposal of radioactive materials:
- ☐ 1. Directly by the licensee:
- ☐ 2. By licensed disposal site:
- ☐ 3. By waste contractor:
- ☐ c. All radioactive materials have been removed such that any remaining residual radioactivity is within the limits of 10 CFR Part 20, Subpart E, and is ALARA.

**C. SURVEYS PERFORMED AND REPORTED**

- ☒ 1. A radiation survey was conducted by the licensee. The survey confirms:
- ☒ 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: \_\_\_\_\_ Date \_\_\_\_\_
- ☐ 3. A radiation survey is not required as only sealed sources were ever possessed under this license, and
- ☐ 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         | TITLE                    | TELEPHONE (Include Area Code) | E-MAIL ADDRESS         |
|--------------|--------------------------|-------------------------------|------------------------|
| Bryce Caudle | Radiation Safety Officer | (317) 443-9035                | bcaudle@mpcphysics.com |

Mail all future correspondence regarding this license to:

Elizabeth Thompson, Administrator, IU Southern Indiana Physicians Cardiology, 550 S. Landmark Ave., Bloomington, IN 47403

**C. CERTIFYING OFFICIAL**

I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT

PRINTED NAME AND TITLE  
Elizabeth Thompson, Administrator  
Kay Fields, COO

SIGNATURE

*Elizabeth Thompson*  
*K. Fields*

DATE

9-6-17  
9/6/17

WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECT. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.



## Sealed Source Leak Test

Licensee: Premier Healthcare, L.L.C.

Date: 06/22/17

Performed by: Bryce Caudle

| Nuclide                      | Type  | Calibration Activity | Calibration Date | Location | M/N     | S/N           |
|------------------------------|-------|----------------------|------------------|----------|---------|---------------|
| Cs-137                       | Vial  | 263.9 uCi            | 08/01/97         | Hot Lab  | IPL     | 569-134-6     |
| Current Activity: 166.63 uCi |       |                      |                  |          |         |               |
| Co-57                        | Flood | 10 mCi               | 02/16/17         | Hot Lab  | BM07-10 | BM07L10170171 |
| Current Activity: 7.245 mCi  |       |                      |                  |          |         |               |
| Ba-133                       | Vial  | 248.9 uCi            | 06/01/10         | Hot Lab  | 144529  | 144529        |
| Current Activity: 156.34 uCi |       |                      |                  |          |         |               |

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: Ludlum 2200 Scaler

| 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:** \_\_\_\_\_



## Sealed Source Inventory

Licensee: Premier Healthcare, L.L.C.

Date: 06/22/17

Performed by: Bryce Caudle

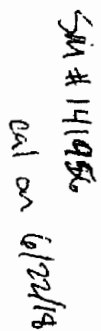
| Nuclide               | Type    | Location          | M/N       | S/N              | Manufacturer |
|-----------------------|---------|-------------------|-----------|------------------|--------------|
| Cs-137                | Vial    | Hot Lab           | IPL       | 569-134-6        |              |
| Calibration Activity: | 264 uCi | Calibration Date: | 08/01/97  | Current Activity | 166.6 uCi    |
| Cs-137                | Rod     | Hot Lab           | IPL       | 567-42           |              |
| Calibration Activity: | 0.5 uCi | Calibration Date: | 11/01/97  | Current Activity | 0.318 uCi    |
| Cs-137                | Disk    | Meter             | NONE      | 2127             |              |
| Calibration Activity: | 1 uCi   | Calibration Date: | 07/01/97  | Current Activity | 0.63 uCi     |
| Cs-137                | Disk    | Meter             | none      | 818              |              |
| Calibration Activity: | 1 uCi   | Calibration Date: | 04/01/04  | Current Activity | 0.737 uCi    |
| Cs-137                | Rod     | Hot Lab           | Benchmark | BM0837-005-8     |              |
| Calibration Activity: | 119 nCi | Calibration Date: | 05/17/04  | Current Activity | 88.14 nCi    |
| Co-57                 | Flood   | Hot Lab           | BM07-10   | BM07L1017017104  |              |
| Calibration Activity: | 10 mCi  | Calibration Date: | 02/16/17  | Current Activity | 7.245 mCi    |
| Ba-133                | Vial    | Hot Lab           | 144529    | 144529           |              |
| Calibration Activity: | 249 uCi | Calibration Date: | 06/01/10  | Current Activity | 156.3 uCi    |

### SEALED SOURCE AMBIENT EXPOSURE SURVEY

Meter: Ludlum 14C:206945

Max Reading: 0.07 mR/hr

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



2nd floor

**2nd floor INTERNAL MEDICINE ASSOCIATES**

DA

### Removable Contamination Survey Results

Wipe samples were counted in a Ludlum Model 243 Shielded Well Scintillator (S/N: 145366) coupled to a Ludlum Model 2200 Scaler Ratemeter (S/N: 138705). The efficiency of this system for cobalt-57 is 1.09 dpm/cpm.

Background: 334 counts per minute

| Wipe Number | Gross counts per minute | Net counts per minute | Disintegrations per minute |
|-------------|-------------------------|-----------------------|----------------------------|
| 1           | 354                     | 20                    | 21.8                       |
| 2           | 340                     | 6                     | 6.54                       |
| 3           | 301                     | 0                     | 0                          |
| 4           | 331                     | 0                     | 0                          |
| 5           | 313                     | 0                     | 0                          |
| 6           | 331                     | 0                     | 0                          |
| 7           | 324                     | 0                     | 0                          |
| 8           | 336                     | 2                     | 2.18                       |
| 9           | 333                     | 0                     | 0                          |
| 10          | 321                     | 0                     | 0                          |
| 11          | 314                     | 0                     | 0                          |
| 12          | 364                     | 30                    | 32.7                       |
| 13          | 292                     | 0                     | 0                          |
| 14          | 316                     | 0                     | 0                          |
| 15          | 323                     | 0                     | 0                          |
| 16          | 331                     | 0                     | 0                          |
| 17          | 351                     | 17                    | 18.53                      |
| 18          | 300                     | 0                     | 0                          |
| 19          | 324                     | 0                     | 0                          |
| 20          | 326                     | 0                     | 0                          |
| 21          | 332                     | 0                     | 0                          |
| 22          | 337                     | 3                     | 3.27                       |
| 23          | 308                     | 0                     | 0                          |
| 24          | 353                     | 19                    | 20.71                      |
| 25          | 329                     | 0                     | 0                          |
| 26          | 368                     | 34                    | 37.06                      |
| 27          | 317                     | 0                     | 0                          |
| 28          | 371                     | 37                    | 40.33                      |
| 29          | 302                     | 0                     | 0                          |
| 30          | 325                     | 0                     | 0                          |
| 31          | 339                     | 5                     | 5.45                       |

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

Maximum removable contamination occurred in area 28. Gross count rate = 371 cpm/100cm<sup>2</sup>.  
 Net count rate (gross minus background) = 371 - 334 = 37 cpm/100cm<sup>2</sup>. Net removable  
 disintegrations per minute = 37 cpm/100cm<sup>2</sup> x 1.09 dpm/cpm = 40.33 dpm/100cm<sup>2</sup>.

#### Conclusion

All radioactive materials have been removed from the area of use and no removable contamination is present.

Close-out survey of Nuclear Cardiology Department, IU Southern Indiana  
Physicians Cardiology  
550 Landmark Ave., Bloomington, IN 47403

Performed by: Bryce A. Caudle, M.S.  
Medical Physics Consultants, Inc.

Radioactive materials usage at this location of use was limited to materials licensed under 10 CFR 35.100 and 35.200. Sealed radioactive sources were possessed and used for equipment quality control.

Wipe tests for removable radioactive contamination were taken on 9/1/17 and analyzed in a Ludlum Model 243 (S/N: 145366) Shielded Well Scintillator coupled to a Ludlum Model 2200 (S/N: 138705) Scaler Ratemeter. A window of 50 to 400 keV was used to analyze the wipes. The efficiency of this system for cobalt-57 is 1.09 dpm/cpm. The results of the wipe samples are enclosed.

The radiation levels survey was performed on 9/1/17 by Bryce Caudle, using a Ludlum Model 14C Geiger-Muller survey meter (S/N: 141956) with a pancake probe. The meter was calibrated on 6/22/18. 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. All radioactive material signage has been removed from 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 transferred to the nuclear medicine department of IU Health Bedford Hospital, NRC license number 13-14823-01. A letter of acknowledgement of receipt from IU Health Bedford Hospital is enclosed. No sealed source had ever been found to be leaking and a copy of the most recent leak test results is enclosed.





# Indiana University Health

September 6, 2017

## Acknowledgement of Receipt

To Whom It May Concern:

This letter is to serve as acknowledgement of receipt of the following radioactive materials, received on September 6, 2017:

Co-57 flood source, 10 mCi, Serial Number BM07L1017017104

Ba-133 vial source, 249 uCi, Serial Number 144529

Cs-137 rod source, 119 nCi, Serial Number BM0837-005-8

Cs-137 rod source, 500 nCi, Serial Number 567-42

Cs-137 vial source, 264 uCi, Serial Number 569-134-6

Please retain a copy of this acknowledgement letter for your records.

Sincerely,

Sarah Pigmon, CNMT, NMTCB(CT)  
Radiation Safety Officer  
IU Health Bedford Hospital  
2900 West 16<sup>th</sup> Street  
Bedford, IN 47421

IU Health Bedford Hospital  
2900 W. 16th Street  
Bedford, IN 47421

T 812.275.1200 800.755.3734

[iuhealth.org](http://iuhealth.org)

## Song, Taehoon

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**From:** Gryglak, Magdalena  
**Sent:** Wednesday, September 06, 2017 2:55 PM  
**To:** Pavon, Sandy; Song, Taehoon; Sandrik, Lauren; Tomczak, Tammy  
**Cc:** Forster, Sara  
**Subject:** FW: Re: Re: Premier Healthcare, LLC, NRC License no. 13-32020-01 termination request  
**Attachments:** CompletedNRCpacket.pdf

Sandy/Lauren/Tae;  
Could you please place the incoming information in ADAMS as soon as possible.

Licensee: Premier Healthcare, LLC  
License no. 13-32020-01  
Docket no. 030-34523

Tammy,  
After the information is placed in ADAMS, please create a termination action in WBL.

Thank you  
Magdalena

**From:** Bryce Caudle [mailto:[bcaudle@mpcphysics.com](mailto:bcaudle@mpcphysics.com)]  
**Sent:** Wednesday, September 06, 2017 2:40 PM  
**To:** Gryglak, Magdalena <[Magdalena.Gryglak@nrc.gov](mailto:Magdalena.Gryglak@nrc.gov)>  
**Subject:** [External\_Sender] Re: Re: Premier Healthcare, LLC, NRC License no. 13-32020-01 termination request

Magdalena,

I have the packet attached with everything you need (hopefully!). Please let me know if there is anything else needed.

Thanks!  
Bryce Caudle

On Wed, Sep 6, 2017 at 9:57 AM, Gryglak, Magdalena <[Magdalena.Gryglak@nrc.gov](mailto:Magdalena.Gryglak@nrc.gov)> wrote:

Thank you!

**From:** Bryce Caudle [mailto:[bcaudle@mpcphysics.com](mailto:bcaudle@mpcphysics.com)]  
**Sent:** Wednesday, September 06, 2017 8:34 AM  
**To:** Gryglak, Magdalena <[Magdalena.Gryglak@nrc.gov](mailto:Magdalena.Gryglak@nrc.gov)>  
**Subject:** [External\_Sender] Re: Premier Healthcare, LLC, NRC License no. 13-32020-01 termination request

Magdalena,

The surveys are completed and sources are shipped. I'm working on getting signatures today and I'll get it emailed to you as soon as I get them back.

Thanks!

Bryce Caudle

On Sep 6, 2017 9:20 AM, "Gryglak, Magdalena" <[Magdalena.Gryglak@nrc.gov](mailto:Magdalena.Gryglak@nrc.gov)> wrote:

Good morning Mr. Caudle,

I am just following up regarding the status of your termination request for Premier Healthcare, LLC.

Thank you

Magdalena