Franciscan HEALTH

October 4, 2021

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

Dear Sir or Madam:

Franciscan Alliance d/b/a Franciscan Health Hammond and Dyer would like to amend its NRC Byproduct Materials License, Number 13-02047-02, to decommission the address of use at our 5454 Hohman Ave., Hammond, IN location. Documentation for the decommissioning of the areas of use at this location are enclosed. Materials used in this area of use were limited to 35.100, 35.200, and 35.300 materials, with the date of final use of materials being August 20, 2021. There were no 35.300 materials present in the facility as of the date of August 20, 2021. Waste materials from procedures using 35.100 and 35.200 materials were held in storage for decay and were subsequently disposed of prior to the closeout survey.

Please update the mailing address for our license to the Franciscan Health Dyer address at 24 Joliet St, Dyer, IN. Additionally, the name of the license should be updated to **Franciscan Alliance, Inc. d/b/a Franciscan Health Dyer** to reflect the removal of Franciscan Health Hammond from the license. No change in ownership is associated with these updates.

If there are any questions concerning this license amendment, please contact our nuclear medicine physicist, Mr. Bryce A. Caudle, M.S., DABSNM at 317-443-9035, or by email at bcaudle@mpcphysics.com.

Sincerely,

Patrick J Maloney
President, Chief Executive Officer
Franciscan Health Dyer, Hammond, & Munster

RECEIVED OCT 14 2021

DYER
24 Jo et Street
Dyer, N 463[illegible]
PH: 219 865 2[illegible] N
PH: 708 895 1650 (IL)

HAMMOND
5454 Hohman Avenue
Hammond IN 46320
PH: 219 932 2300 (IN)
PH: 708 891 9305 (IL)

MUNSTER
70[illegible] Superior Avenue
Munster IN 4632[illegible]
PH: 2[illegible]9 922 4200

FranciscanHealth.org

Close-out survey of Franciscan Health Hammond Nuclear Medicine
5454 Hohman Avenue, Hammond, IN 46320

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

Radioactive materials usage at this address of use was limited to materials licensed under 10 CFR 35.100, 35.200, 35.300 and 31.11. Sealed radioactive sources were possessed and used for patient treatment and equipment quality control.

Wipe tests for removable radioactive contamination were taken on 9/20/2021 and analyzed in a Ludlum Model 243 (S/N: 117305) Shielded Well Scintillator coupled to a Ludlum Model 2200 (S/N: 116584) Scaler Ratemeter. A window of 50 to 400 keV was used to analyze the wipes. The efficiency of this system for cobalt-57 is 1.15 dpm/cpm. The results of the wipe samples are enclosed.

The radiation levels survey was performed on 9/20/2021 by Bryce Caudle, using a Ludlum Model 14C Geiger-Muller survey meter (S/N: 230278) with an end-window probe. The meter was calibrated on 3/2/2021. 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 Eckert and Ziegler for disposal, with the exception of one Cs-137 button source on a GM meter transferred to our Dyer nuclear medicine location of use. A letter of acknowledgement of receipt from Eckert and Ziegler is enclosed. No sealed source had ever been found to be leaking and a copy of the most recent leak test results is enclosed.

Removable Contamination Survey Results - Franciscan Hammond

Wipe samples were counted in a Ludlum Model 243 Shielded Well Scintillator (S/N: 117305) coupled to a Ludlum Model 2200 Scaler Ratemeter (S/N: 116584) The efficiency of this system for cobalt-57 is 1.15 dpm/cpm.

Background: 161 counts per minute

| Wipe Number | Gross counts per minute | Net counts per minute | Disintegrations per minute |
|---|---|---|---|
| 1 | 180 | 19 | 21.85 |
| 2 | 166 | 5 | 5.75 |
| 3 | 156 | 0 | 0 |
| 4 | 168 | 7 | 8.05 |
| 5 | 146 | 0 | 0 |
| 6 | 159 | 0 | 0 |
| 7 | 127 | 0 | 0 |
| 8 | 176 | 15 | 17.25 |
| 9 | 157 | 0 | 0 |
| 10 | 205 | 44 | 50.6 |
| 11 | 151 | 0 | 0 |
| 12 | 172 | 11 | 12.65 |
| 13 | 164 | 3 | 3.45 |
| 14 | 140 | 0 | 0 |
| 15 | 169 | 8 | 9.20 |
| 16 | 170 | 9 | 10.35 |
| 17 | 162 | 1 | 1.15 |
| 18 | 165 | 4 | 4.60 |
| 19 | 161 | 0 | 0 |
| 20 | 180 | 19 | 21.85 |
| 21 | 175 | 14 | 16.10 |
| 22 | 149 | 0 | 0 |
| 23 | 161 | 0 | 0 |
| 24 | 179 | 18 | 20.70 |
| 25 | 168 | 7 | 8.05 |
| 26 | 135 | 0 | 0 |
| 27 | 150 | 0 | 0 |
| 28 | 171 | 10 | 11.50 |
| 29 | 172 | 11 | 12.65 |
| 30 | 185 | 24 | 27.60 |
| 31 | 156 | 0 | 0 |
| 32 | 158 | 0 | 0 |
| 33 | 160 | 0 | 0 |
| 34 | 143 | 0 | 0 |
| 35 | 163 | 2 | 2.30 |
| 36 | 160 | 0 | 0 |
| 37 | 185 | 24 | 27.60 |
| 38 | 159 | 0 | 0 |
| 39 | 163 | 2 | 2.30 |

| | | | |
|---|---|---|---|
| 40 | 173 | 12 | 13.80 |
| 41 | 166 | 5 | 5.75 |
| 42 | 168 | 7 | 8.05 |
| 43 | 163 | 2 | 2.30 |
| 44 | 171 | 10 | 11.50 |
| 45 | 173 | 12 | 13.80 |
| 46 | 168 | 7 | 8.05 |
| 47 | 183 | 22 | 25.30 |
| 48 | 165 | 4 | 4.60 |
| 49 | 165 | 4 | 4.60 |
| 50 | 171 | 10 | 11.50 |
| 51 | 166 | 5 | 5.75 |
| 52 | 165 | 4 | 4.60 |
| 53 | 160 | 0 | 0 |
| 54 | 186 | 25 | 28.75 |
| 55 | 174 | 13 | 14.95 |
| 56 | 193 | 32 | 36.80 |
| 57 | 142 | 0 | 0 |
| 58 | 171 | 10 | 11.50 |
| 59 | 184 | 23 | 26.45 |
| 60 | 188 | 27 | 31.05 |
| 61 | 173 | 12 | 13.80 |
| 62 | 158 | 0 | 0 |
| 63 | 174 | 13 | 14.95 |
| 64 | 146 | 0 | 0 |
| 65 | 180 | 19 | 21.85 |
| 66 | 179 | 18 | 20.70 |
| 67 | 180 | 19 | 21.85 |
| 68 | 194 | 33 | 37.95 |
| 69 | 169 | 8 | 9.20 |
| 70 | 168 | 7 | 8.05 |
| 71 | 176 | 15 | 17.25 |
| 72 | 162 | 1 | 1.15 |
| 73 | 193 | 32 | 36.80 |

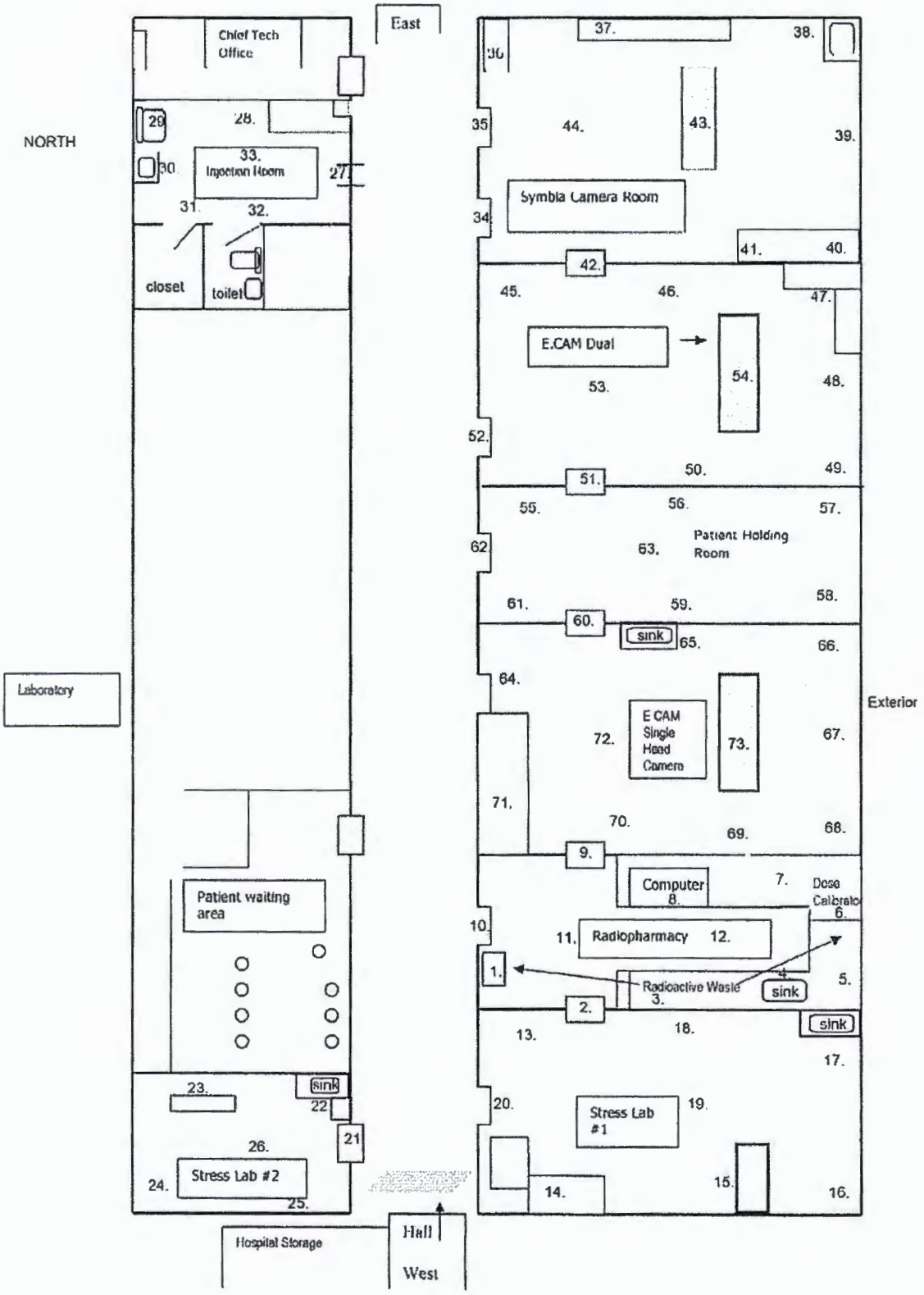
*Please refer to the attached survey map for wipe locations.

Maximum removable contamination occurred in area 10. Gross count rate = 205 cpm/100cm$^2$. Net count rate (gross minus background) = 205 – 161 = 44 cpm/100cm$^2$. Net removable disintegrations per minute = 44 cpm/100cm$^2$ x 1.15 dpm/cpm = 50.60 dpm/100cm$^2$.

Conclusion

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

*Franciscan St. Margaret Health – Hammond* *Nuclear Medicine Department*



MPC
MEDICAL PHYSICS CONSULTANTS INC

# Sealed Source Inventory

Facility: Franciscan Health Hammond

Date: 06/17/21

Performed by: Bryce Caudle

| Nuclide | Type | Location | M/N | S/N | Manufacturer |
|---|---|---|---|---|---|
| Eu-152 | Rod | Hot Lab | IPL | 1140-83-15 | |
| Calibration Activity: | 0.5 uCi | Calibration Date: | 02/01/06 | Current Activity | 0.225 uCi |
| Cs-137 | Rod | Hot Lab | IPL | 1140-82-79 | |
| Calibration Activity: | 0.5 uCi | Calibration Date: | 02/01/06 | Current Activity | 0.35 uCi |
| Cs-137 | Vial | Hot Lab | Eckert & Ziegler | 1296-4-3 | |
| Calibration Activity: | 201 uCi | Calibration Date: | 07/01/08 | Current Activity | 148.9 uCi |
| Cs-137 | Rod | Hot Lab | Eckert & Ziegler | 1280-33-39 | |
| Calibration Activity: | 0.5 uCi | Calibration Date: | 07/01/08 | Current Activity | 0.371 uCi |
| Co-58 | Vial | Storage | | DICOPAC | |
| Calibration Activity: | 0.14 uCi | Calibration Date: | 03/22/99 | Current Activity | #Type! uCi |
| Cs-137 | Button | Ludlum | | 2347 | |
| Calibration Activity: | 1 uCi | Calibration Date: | | Current Activity | uCi |
| Cs-137 | Button | Ludlum | | 2675 | |
| Calibration Activity: | 1 uCi | Calibration Date: | | Current Activity | uCi |
| Cs-137 | Button | Storage | | SMHCS004 | |
| Calibration Activity: | 10 uCi | Calibration Date: | | Current Activity | uCi |
| Cs-137 | Button | Storage | | 184642 | |
| Calibration Activity: | 0.1 uCi | Calibration Date: | 04/01/71 | Current Activity | 0.031 uCi |
| Cs-137 | Vial | Storage | NES-356 | 3560278A01 | |
| Calibration Activity: | | Calibration Date: | 02/01/79 | Current Activity | |
| Cs-137 | Rod | Storage | | | |
| Calibration Activity: | 0.11 uCi | Calibration Date: | 01/15/92 | Current Activity | 0.055 uCi |
| Co-57 | Flood | Hot Lab | MED3709 | 2074-049 | |
| Calibration Activity: | 10 mCi | Calibration Date: | 04/01/19 | Current Activity | 1.266 mCi |
| Co-57 | Flood | Hot Lab | MED3709 | 2195-041 | |
| Calibration Activity: | 10 mCi | Calibration Date: | 12/01/20 | Current Activity | 6.026 mCi |
| Ba-133 | Capsule | Storage | | | |
| Calibration Activity: | 50.9 uCi | Calibration Date: | | Current Activity | uCi |

## *Sealed Source Inventory*

Facility: Franciscan Health Hammond  Date: 06/17/21

Performed by: Bryce Caudle

| Nuclide | Type | Location | M/N | S/N | Manufacturer |
|---|---|---|---|---|---|
| Co-57 | Ruler | Hot Lab | SRR-057-160U | 2076-12-1 | |
| Calibration Activity: | | 160 uCi | Calibration Date: 06/01/19 | Current Activity | 23.67 uCi |
| Cs-137 | Rod | Storage | | SMH001c | |
| Calibration Activity: | | 1 uCi | Calibration Date: | Current Activity | uCi |
| Cs-137 | Rod | Storage | | SMHCS002 | |
| Calibration Activity: | | 1 uCi | Calibration Date: | Current Activity | uCi |
| Co-57 | Vial | Storage | | DICOPAC | |
| Calibration Activity: | | 0.08 uCi | Calibration Date: 03/06/99 | Current Activity | 0 uCi |

***RADIATION SAFETY OFFICER:*** _____

MPC
MEDICAL PHYSICS CONSULTANTS, INC

# *Sealed Source Leak Test*

Licensee: Franciscan Health Hammond  Date: 06/17/21

Performed by. Bryce Caudle

| Nuclide | Type | Calibration Activity | Calibration Date | Location | M/N | S/N |
|---|---|---|---|---|---|---|
| Cs-137 | Vial | 200.9 uCi | 07/01/08 | Hot Lab | Eckert & Ziegler | 1296-4-3 |
| Current Activity: 148.89uCi | | | | | | |
| Co-57 | Flood | 10 mCi | 04/01/19 | Hot Lab | MED3709 | 2074-049 |
| Current Activity: 1.266mCi | | | | | | |
| Co-57 | Flood | 10 mCi | 12/01/20 | Hot Lab | MED3709 | 2195-041 |
| Current Activity: 6.026mCi | | | | | | |

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 leak test wipes were analyzed using instrumentation capable of detecting 185 Bq (0.005 uCi) radioactivity on the wipe.

*RADIATION SAFETY OFFICER:* _____

Eckert & Ziegler

**Receiving**
Eckert & Zielqer Isotope Products Ltd.
1800 N Keystone St.
Burbank, CA 91504
United States

Telephone +1-661-309-1010
Fax +1-661-257-8303

# Return Acknowledgement

**Shipped From:**
Franciscan Health Hammond
Marjan Murceski, 219.515.3940
marjan.murceski@franciscanalliance.org
5454 Hohman Ave
Hammond, IN 46320
United States

| | |
|---|---|
| Return Number | CO-445751 |
| RMA number | RA-013907 |
| Date | 9/18/2021 |
| Page | 1 of 2 |
| Customer account | CARDINAL |
| Customer reference | |
| Customer requisition | |

Dear Valued Customer,
Eckert & Ziegler Isotope Products Laboratories has received your radioactive source(s) and takes responsibility for tracking and storage of the source(s) listed below. If you have any further questions about the source(s), please contact EZIP and reference the return number listed above. Thank you for your business.

| Item number | Batch number | Serial number | Quantity returned | Received on | Description |
|---|---|---|---|---|---|
| A3525-2-10M | | 2074-049 | 1.00 | 9/16/2021 | COMPONENT : R24 Flood Source MED3709 |
| Nuclide Info: Co-57 | 10 mCi | Ref. Date: 4/1/2019 | | | |
| A3525-2-10M | | 2195-041 | 1.00 | 9/16/2021 | COMPONENT : R24 Flood Source |
| Nuclide Info: Co-57 | 10 uCi | Ref. Date: 12/1/2020 | | | |
| GF-0009 | | 1140-83-15 | 1.00 | 9/16/2021 | 5" Rod, Eu-152, 0.5uCi (18.5kBq), 1102, Type R2 Rod, 127mm H x 12.7 mm D, Nominal, Exempt Quantity, CEMARK1 |
| Nuclide Info: Eu-152 | 0.5 uCi | Ref. Date: 2/1/2006 | | | |
| GF-0008 | | 1140-82-79 | 1.00 | 9/6/2021 | 5" Rod, Cs-137, 0.5uCi (18.5kBq), 1102, Type R2 Rod, 127 mm H x 12.7 mm D, Nominal, Exempt Quantity, Calibration Rod, CEMARK1 |
| Nuclide Info: Cs-137 | 0.5 uCi | Ref. Date: 2/1/2009 | | | |
| EXCHANGE | Unknown(16Sep21) | | 1.00 | 9/16/2021 | Misc item for recycle/disposal Mak 01 |
| Nuclide Info: Ba-133 | 50.9 uCi | Ref. Date: 1/1/2000 | | | |
| SRR-057-160U | | 2076-12-1 | 1.00 | 9/16/2021 | Rigid Ruler, Co-57, 160 uCi |
| Nuclide Info: Co-57 | 160 uCi | Ref. Date: 6/1/2009 | | | |
| EXCHANGE | SMH001C | | 1.00 | 9/16/2021 | Misc item for recycle/disposal Unknown Rod |
| Nuclide Info: Cs-137 | 1 uCi | Ref. Date: 1/1/2000 | | | |
| EXCHANGE | SMHCS002 | | 1.00 | 9/16/2021 | Misc item for recycle/disposal Unknown Spot Marker |
| Nuclide Info: Cs-137 | 1 uCi | Ref. Date: 1/1/2000 | | | |
| EXCHANGE | Unknown (16Sep21)2 | | 1.00 | 9/16/2021 | Misc item for recycle/disposal Dicopac Vial |
| Nuclide Info: Co-57 | 0.14 uCi | Ref. Date: 3/1/1999 | | | |

Eckert & Ziegler

**Receiving**
Eckert & Zielger Isotope Products Ltd.
1800 N Keystone St.
Burbank, CA 91504
United States

Telephone +1-661-309-1010
Fax +1-661-257-8303

# Return Acknowledgement

**Shipped From:**
Franciscan Health Hammond
Marjan Murceski, 219.515.3940
marjan.muvceski@franciscanalliance.org
5454 Hohman Ave
Hammond, IN 46320
United States

| | |
|---|---|
| Return Number | CO-445751 |
| RMA number | RA-013907 |
| Date | 9/18/2021 |
| Page | 2 of 2 |
| Customer account | CARDINAL |
| Customer reference | |
| Customer requisition | |

Dear Valued Customer,

Eckert & Ziegler Isotope Products Laboratories has received your radioactive source(s) and takes responsibility for tracking and storage of the source(s) listed below. If you have any further questions about the source(s), please contact EZIP and reference the return number listed above. Thank you for your business.

| Item number | Batch number | Serial number | Quantity returned | Received on | Description |
|---|---|---|---|---|---|
| EXCHANGE | 184642(16Sep21) | | 1.00 | 9/16/2021 | Misc item for recycle/disposal Amersham Rod |
| Nuclide Info: Cs-137 | 0.1 uCi | Ref. Date: 4/1/1971 | | | |
| EXCHANGE | 3560278A01 | | 1.00 | 9/16/2021 | Misc item for recycle/disposal NES356 Vial |
| Nuclide Info: Cs-137 | 1E-06 uCi | Ref. Date: 2/1/1979 | | | |
| EXCHANGE | Unknown (16Sep21)3 | | 1.00 | 9/16/2021 | Misc item for recycle/disposal Unknown Rod |
| Nuclide Info: Cs-137 | 0.11 uCi | Ref. Date: 1/15/1992 | | | |
| EXCHANGE | Unknown (16Sep21)4 | | 1.00 | 9/16/2021 | Misc item for recycle/disposal Dicopac Vial |
| Nuclide Info: Co-58 | 0.016 uCi | Ref. Date: 3/22/1999 | | | |
| RV-137-200U | | 1296-4-3 | 1.00 | 9/16/2021 | Cs-137,7.4MBq(200uCi) Dose Calibrator Std, NIST, CEMARK1 |
| Nuclide Info: Cs-137 | 201 uCi | Ref. Date: 7/1/2008 | | | |
| GF-0008 | | 1280-33-39 | 1.00 | 9/16/2021 | 5" Rod, Cs-137, 0.5uCi (18.5kBq), 1102, Type R2 Rod, 127 mm H x 12.7 mm D, Nominal, Exempt Quantity, Calibration Rod, CEMARK1 |
| Nuclide Info: Cs-137 | 0.5 uCi | Ref. Date: 7/1/2008 | | | |
| EXCHANGE | 2347 | | 1.00 | 9/16/2021 | Misc item for recycle/disposal Spectrum Spot Marker |
| Nuclide Info: Cs-137 | 1 uCi | Ref. Date: 1/1/2000 | | | |
| EXCHANGE | SMHCS004 | | 1.00 | 9/16/2021 | Misc item for recycle/disposal Spectrum Spot Marker |
| Nuclide Info: Cs-137 | 10 uCi | Ref. Date: 1/1/2000 | | | |

Franciscan ALLIANCE

**Hammond**

# DECAY IN STORAGE ( In-House )

A) Ludlum Model 14 C

B) Ludlum 14CXX

| Container # | Date Stored | Radioisotope | Tech | Date Disposed | bckg reading mR/HR | Surface Reading mR / HR | Tech | Survey Instrument Used |
|---|---|---|---|---|---|---|---|---|
| 1 | 9/10/20 | $^{99m}Tc$ | MP | 12/15/20 | .03 | .03 | MP | A |
| 2 | 12/14/20 | $^{99m}Tc$ | MP | 3/25/21 | .02 | .02 | MP | A |
| 3 | 2/22/21 | $^{99m}Tc$ | MP | 3/25/21 | .02 | .02 | MP | A |
| 4 | 3/25/21 | $^{99m}Tc$ | MP | 3/25/21 | .02 | .02 | MP | A |
| 5 | 5/17/21 | $^{99m}Tc$ | MP | 6/28/21 | 0.03 | 0.03 | MP | A |
| 6 | 7/28/21 | $^{99m}Tc$ | MP | 8/21/21 | 0.03 | 0.03 | MP | A |
| 7 | 9/20/21 | $^{99m}Tc$ | MP | 9/20/21 | 0.03 | 0.03 | MP | A |
| | | | | | | | | |
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SC in PC 12-21-20

in MC 6-17-21

Franciscan Health Dyer
Nuclear Medicine
24 Joliet Street
Dyer, IN 46311

CERTIFIED MAIL™

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

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