



May 4, 2022

Henry Ford Hospital
Radiation Safety Office
2799 West Grand Blvd.
Detroit, Michigan 48202-2689
(734) 657-4133 Mobile (Preferred)
(313) 916-8456 Fax

Frank Tran, Health Physicist/License Reviewer
Materials Licensing Branch
U.S. Nuclear Regulatory Commission, Region III
Division of Nuclear Materials Safety
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352
800) 522-3025
(630) 515-1078 FAX

Mr. Tran:

I am responding to your April 29, 2022 e-mail regarding Mail Control Number 630510 related to the March 23, 2022 license amendment request for Henry Ford Hospital (NRC License No. 21-04109-16; Docket 030-02043). You requested a copy of the most recent leak tests, if applicable, for the sealed sources used at the Henry Ford Lakeside Medical Center at 14500 Hall Road Sterling Heights, MI 48313.

Sealed Sources Used at the Henry Ford Lakeside Medical Center

These are the only radioactive sealed sources used at the Henry Ford Lakeside Medical Center:

Isotope	Type	Original Activity	Original Date	Serial Number	Manufacturer
Cs-137	Rod	1.029 µCi	1-Aug-08	1278-2-2	Isotope Products Laboratories
Co-57	Rod	1.016 µCi	1-Feb-08	1278-46-28	Isotope Products Laboratories
Cs-137	Vial	206 µCi	25-Oct-78	S35861078A12	NEN

Please note that the two “rod” type sources are below our leak testing activity threshold for beta/gamma emitting sources of 100 µCi. Consequently, we did not leak test these two rod sources. All of these sources were removed from the facility and brought to

Henry Ford Hospital. Subsequently, all of these sources were shipped for disposal. The Cs-137 vial source was shipped for disposal on June 5, 2019. Consequently the leak testing for the Cs-137 source dates back to that time period.

Leak Test Report for Cs-137 Vial Source

The Cs-137 vial source was last leak tested with a variety of other sources being disposed of at the same time. The results for the leak test conducted on 2/19/2019. The Cs-137 vial source indicated above was leak tested using a wipe technique. The method used is largely consistent with the Model Leak Test Program in NUREG-1556 Volume 9 Revision 3 Appendix Q. The results are shown below:

Sealed source Leak test

Facility: Henry Ford Hospital

Date: 2/19/2019

Bkg: 16

Effic: 0.13

MDA 4.07E-05 uCi

Source	SN	Gross cts	Net Cts	Measured Activity	Pass/Fail
Cs ¹³⁷	1212-27-79 (Z-02)	17	1	5.98E-08 uCi	Pass
Cs ¹³⁷	667-542 (Z-03)	17	1	5.98E-08 uCi	Pass
Cs ¹³⁷	99-2599	17	1	5.98E-08 uCi	Pass
Cs ¹³⁷	Z-15	17	1	5.98E-08 uCi	Pass
Cs ¹³⁷	Z-16	17	1	5.98E-08 uCi	Pass
Cs ¹³⁷	Z-17	17	1	5.98E-08 uCi	Pass
Cs ¹³⁷	Z-23	17	1	5.98E-08 uCi	Pass
Cs ¹³⁷	Z-24	17	1	5.98E-08 uCi	Pass
Cs ¹³⁷	Z-25	17	1	5.98E-08 uCi	Pass
Cs ¹³⁷	3560781A-09 (Z-30)	17	1	5.98E-08 uCi	Pass
Cs ¹³⁷	12-1366-31-14 (Z-36)	17	1	5.98E-08 uCi	Pass
Cs ¹³⁷	S35861078a12 (Z-40)	17	1	5.98E-08 uCi	Pass



Performed by: Mayur Vaya

Mayur Vaya from the Radiation Safety Office measured the sample using a 1 minute count time on the NaI(Tl) well counter of the Captus 3000 Serial Number CNV-444. A narrow window centered on the 662 keV photopeak measured a sample net count rate of 17 counts per minute (cpm) compared to the background rate of 16 cpm. The counting efficiency measured for Cs-137 under these conditions was 13%. Thus, the best estimate of the net reading is $5.98 \times 10^{-8} \mu\text{Ci}$. However, since the minimum detectable activity (MDA) for these counting conditions has a higher value of $4.07 \times 10^{-8} \mu\text{Ci}$ the measurement limitations indicate reporting the MDA result. Importantly, the slightly positive result is indistinguishable from the background or blank measurement. The NRC license criterion for this measurement is $0.005 \mu\text{Ci}$. This result is clearly below the $0.005 \mu\text{Ci}$ criteria.

Receipt of Radioactive Waste

While this was not requested, the receipt of these sources for waste is shown below.

June 11, 2019

MAYUR VAYA

HENRY FORD HOSPITAL
2799 W GRAND BLVD
DETROIT, MI 48202

Mayur,

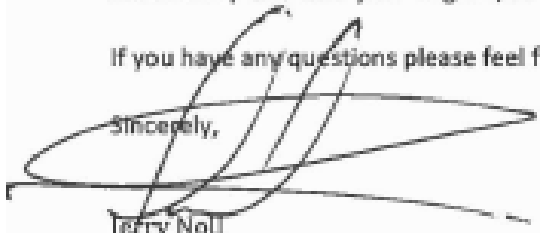
As required by 10 CFR Part 20 (Appendix G), this letter is notification that Bionomics, Inc. has received the shipment recently picked up at your facility on June 5, 2019.

Attached you will find a copy of your NRC Form 540, the only change from the original is in Item No.9 "signature" which identifies that Bionomics, Inc. is acknowledging receipt of waste from your facility.

Please keep this with your original, as well as future disposal certifications.

If you have any questions please feel free to contact me at (865) 220-8501.

Sincerely,


Jeffrey Noll
QA Manager

Cc: File BIO-06-19

Discussion

If you should have any questions or concerns regarding this request, please contact Alan M. Jackson, MS, CHP at (734) 657-4133) or via email at both: AlanJ@rad.hfh.edu and alanjster@gmail.com

Sincerely,



Alan M. Jackson, MS, CHP
Radiation Safety Officer

Filename: HFH LKS SS information 5-22.docx

Pavon, Martha

From: Tran, Frank
Sent: Wednesday, May 4, 2022 10:14 AM
To: Pavon, Sandy; Pavon, Martha
Cc: Tomczak, Tammy
Subject: FW: RE: Request additional information for NRC License No. 21-04109-16
Attachments: HFH LKS SS information 5-22.pdf; 630510 Additional information_ 665.pdf

Dear IM Center:

Please add the attachment as an additional information for CN 630510. If you have any questions, please let me know.

Thank you,
Frank

From: Jackson, Alan (RSO) <AlanJ@rad.hfh.edu>
Sent: Wednesday, May 04, 2022 9:54 AM
To: Tran, Frank <Frank.Tran@nrc.gov>
Subject: [External_Sender] RE: Request additional information for NRC License No. 21-04109-16

Frank Tran,

Please see the attached letter which I hope addresses your needs.

Please let me know if you need anything else.

-Alan

Alan M. Jackson, MS, CHP

Radiation Safety Officer

Henry Ford Hospital

2799 West Grand Boulevard

Detroit, MI 48202

(313) 916-2739 Voice

(313) 916-8456 Fax

(734) 657-4133 Cell

E-mail: AlanJ@rad.hfh.edu

HENRY FORD HEALTH.