

July 26, 2018

Magdalena R. Gryglak  
U.S. NRC Region III  
2443 Warrenville Rd.  
Suite 210  
Lisle, IL 60532-4352

Re: U.S. NRC Radioactive Materials License number 24-32517-01

Dear Ms. Gryglak:

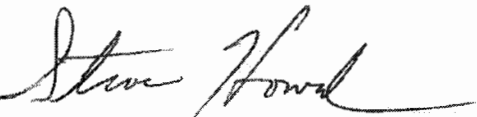
This letter is in response to your request for additional information to process our amendment request to remove the location at 1000 East 101<sup>st</sup> Terrace from our license.

Please find attached the following documentation:

- Final closeout survey of areas where radioactive materials were used/stored
- List of sealed sources kept at the location with most recent leak test results
- Acknowledgement documentation for each of these sealed sources from the authorized recipients

If there is any additional information you need, please let me know. Thank you for your assistance in this matter.

Sincerely,

A handwritten signature in cursive script that reads "Steve Howard". The signature is written in black ink and is positioned below the word "Sincerely,".

Stephen Howard, M.S.  
Medical Physicist, RSO  
Kansas City Cancer Centers  
University of Kansas Cancer Center  
Kansas City, MO 64131  
Tel: 913-574-2727  
Cell: 913-967-9056  
Email: showard2@kumc.edu

Ludlum 9DP 25014264 cal due 12/14/2018

Background: 11 uR/hr

Ludlum 14C 326605 cal due 3/2/2019

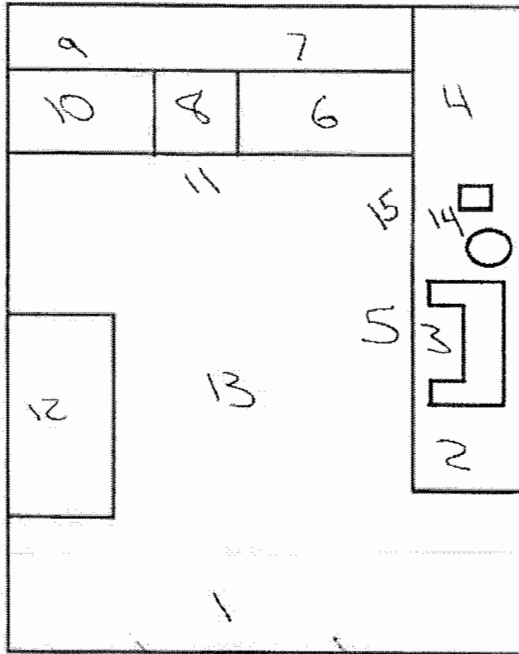
Background: 43 cpm

Ludlum 44-9 pgm PR364310

Wipes: 100 cm<sup>2</sup>

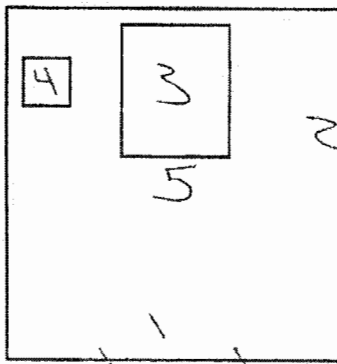
Wipes were counted with the 14C/44-9. Exposure rates and counts are NET readings (minus background.)

HOTLAB 5/21/2018



	<u>uR/hr</u>	<u>CPM</u>	<u>uR/hr</u>	<u>CPM</u>
1. floor	4	14	12. table	3 30
2. counter	1	10	13. floor	1 21
3. L-Block	4	22	14. Dose cal	2 -
4. counter	2	18	15. Decay in Storage	4 14
5. floor	6	11		
6. counter	2	7		
7. cabinet	3	19		
8. sink	2	29		
9. cabinet	4	16		
10. counter	7	20		
11. floor	4	-4		

INJECTION AREA 5/21/2018



	<u>uR/hr</u>	<u>CPM</u>
1. floor	4	34
2. sharps	5	18
3. chair	2	0
4. trash	1	23
5. floor	2	6

JASON BARNEY, RRPT

Health Physicist, KU Health System

Licensee: University of Kansas Cancer Center - South	License Number: 24-32517-01
Address: 1000 E. 101st Terrace	Expiration: 12/31/24
Kansas City, MO 64131	

### SEALED SOURCE LEAK TEST CERTIFICATE 01/09/18

LEAK TEST REQUIRED	Source	Serial Number	Manufacturer	Model	Wipe Count (5 min)	Bkg Count (5 min)	Wipe Activity (uCi)	Acceptable 35.67(e)
X	Cs-137	1074-29-10	IPL		970	995	NDA	YES
X	Co-57	3M06057E1632010	Bench/Mark	BM06E-57	960	995	NDA	YES
	Cs-137	BM0813708295104	RadQual	BM0A-37				
X	Co-57	3M01L2101615910	RadQual	BM01L10	975	995	NDA	YES
	Co-57	BM03057L16083204	RadQual	BM03057L				


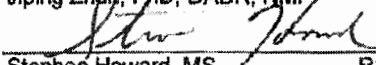
Leak Test Performed By:	Jiping Zhan	Background Count:	995
Leak Test Performed On:	01/09/18	Delta1 (net counts):	73
Leak Test Samples Counted By:	Jiping Zhan	Delta2 (net counts):	149
Leak Test Samples Counted On:	01/10/18	Decision Limit (Lc):	1144

Method: Each leak test sample was collected by wiping an alcohol pad over the exposed surface of the source.  
 No Detectable Activity (NDA): Wipe count equal to or less than the Decision Limit (Bkg + 4.66\*SQRT(Bkg))

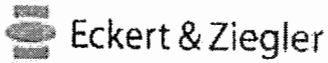
Instrument: Capintec, Caprac-I S/N 10067

Standard Source Information				Count Data				
Source	Serial No.	Activity (uCi)	Calibration Date	Date	Source (5 min)	Bkg (5 min)	Efficiency (c/d)	MDA (uCi)
Ba-133	1036-32-2	0.1056	02/01/04	12/18/17	441815	900	0.940	1.5E-05
Co-57	1848-51-4	0.1082	10/01/16	12/18/17	361055	900	0.928	1.5E-05
Co-60	NEN02118	0.121	02/26/80	12/18/17	4495	900	0.388	3.6E-05
Cs-137	962-51-9	0.09755	03/01/04	12/18/17	235300	900	0.298	4.6E-05

Test Date: 01/09/18	Regulation: 10 CFR 35.67(b)
Results: <b>PASS</b>	Frequency: Semi-Annual
Next Test Due: 07/10/18	Recordkeeping: 3 years

  
 Jiping Zhan, PhD, DABR, NMP  
  
 Stephen Howard, MS RSO

01/15/18  
 Date  
 1-19-2018  
 Date



Receiving  
 1800 Facility  
 1800 N. Keystone St.  
 Burbank, CA 91504  
 US

Telephone.....: (661) 309-1010  
 Fax.....: (661) 257-8303  
 Giro.....  
 Tax exempt number.....: SRAC11-638175  
 Recipient.....:

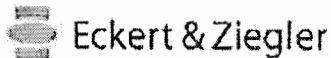
Shipped From:  
 University of Kansas Hospital  
 Kay Dreiling  
 913-588-6839  
 Kdreiling@kumc.edu  
 3901 Rainbow Blvd.  
 Kansas City, KS 66160  
 United States

## Return acknowledgement

Return Number.....: 320895  
 RMA number.....: RMA\_033622  
 Date.....: 5/24/2018  
 Page.....: 1 of 1  
 Customer account.....: SIRCOM01  
 Customer reference.....  
 Contact.....  
 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	BM01L1016159104		1.000000	5/21/2018	Flood (RadQual) track# 8117 3181 4392
Nuclide Info: Co-57      10.000000 mCi      Ref. Date: 7/7/2016					
EXCHANGE	BM0813709295104		1.000000	5/21/2018	Rod (RadQual) track# 8117 3181 4392
Nuclide Info: Cs-137      119.000000 nCi      Ref. Date: 10/27/2009					



Receiving  
 1800 Facility  
 1800 N. Keystone St.  
 Burbank, CA 91504  
 US

Telephone.....: (661) 309-1010  
 Fax.....: (661) 257-8303  
 Giro.....  
 Tax exempt number.....: SRAC11-638175  
 Recipient.....:

Shipped From:  
 University of Kansas Hospital  
 Kay Dreiling  
 913-588-6839  
 Kdreiling@kumc.edu  
 3901 Rainbow Blvd.  
 Kansas City, KS 66160  
 United States

## Return acknowledgement

Return Number: .....: 320895  
 RMA number.....: RMA\_033621  
 Date.....: 5/24/2018  
 Page.....: 1 of 1  
 Customer account.....: SIRCOM01  
 Customer reference.....  
 Contact.....  
 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	BM06057E15320105		1.000000	5/21/2018	Vial (Radqual) trck# 8117 3181 4407
	Nuclide Info: Co-57	5.240000 mCi	Ref. Date: 11/18/2015		
SRV-137-200U		1074-29-10	1.000000	5/21/2018	Vial trck# 8117 3181 4407
	Nuclide Info: Cs-137	181.600000 uCi	Ref. Date: 10/1/2004		
EXCHANGE	BM03057L16083204		1.000000	5/21/2018	Spot Marker (Radqual) trck# 8117 3181 4407
	Nuclide Info: Co-57	50.000000 uCi	Ref. Date: 3/25/2016		

## Song, Taehoon

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**From:** Gryglak, Magdalena  
**Sent:** Thursday, July 26, 2018 9:49 AM  
**To:** Song, Taehoon; Sandrik, Lauren; Pavon, Sandy  
**Cc:** Tomczak, Tammy  
**Subject:** FW: RE: RE: [External] Request to remove a location of use, NRC license no. 24-32517-01, University of Kansas Cancer Center  
**Attachments:** South Closeout Documents.pdf

Please place in adams  
CN 609046  
University of Kansas Cancer Center  
24-32517-01  
030-36583

Thank you  
MG

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**From:** Steve Howard [mailto:showard2@kumc.edu]  
**Sent:** Thursday, July 26, 2018 8:15 AM  
**To:** Gryglak, Magdalena <Magdalena.Gryglak@nrc.gov>  
**Subject:** [External\_Sender] RE: RE: [External] Request to remove a location of use, NRC license no. 24-32517-01, University of Kansas Cancer Center

Hi Magdalena

Attached is the letter and additional documentation you requested. Let me know if you need anything else!

Sincerely,

Steve Howard

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**From:** Gryglak, Magdalena [mailto:Magdalena.Gryglak@nrc.gov]  
**Sent:** Friday, July 20, 2018 3:28 PM  
**To:** Steve Howard  
**Subject:** RE: RE: [External] Request to remove a location of use, NRC license no. 24-32517-01, University of Kansas Cancer Center

Thank you!

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**From:** Steve Howard [mailto:showard2@kumc.edu]  
**Sent:** Friday, July 20, 2018 3:23 PM  
**To:** Gryglak, Magdalena <Magdalena.Gryglak@nrc.gov>  
**Subject:** [External\_Sender] RE: [External] Request to remove a location of use, NRC license no. 24-32517-01, University of Kansas Cancer Center

Hi Magdalena

Sorry it's taking me a little longer to gather all the information than I thought. I should have it for you by next week if that is okay with you.

Sincerely,

Steve Howard

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**From:** Gryglak, Magdalena [<mailto:Magdalena.Gryglak@nrc.gov>]

**Sent:** Friday, June 22, 2018 1:15 PM

**To:** Steve Howard

**Subject:** [External] Request to remove a location of use, NRC license no. 24-32517-01, University of Kansas Cancer Center

Good afternoon Mr. Howard,

I reviewed your request dated May 24, 2018 to remove a location of use, license no. 24-32517-01, University of Kansas Cancer Center. I am following up with an email after I left a voice message regarding some additional information needed to release the location of use for unrestricted use. Please provide the following information:

- 1) Final status surveys for all areas where materials were used or stored at the location:
  - a. A survey map providing contamination and exposure rates keyed to specific locations within each room where radioactive material was used and stored;
  - b. Background readings as well as guidance/action levels;
  - c. Instrumentation used including the manufacturer's names and model numbers, last calibration date, and efficiency/correction factors;
  - d. Date and name/s of individuals performing the final status survey;
- 2) List of sealed sources used at the location;
- 3) Most recent leak test results for each source before transfer/shipment, if applicable;
- 4) Disposition of each source (facility, license number)
- 5) Acknowledgement documentation (from the recipient licensee Radiation Safety Officer) for each source transferred to another authorized recipient, confirming such receipt.

Please provide the requested information under a signed and dated letter by July 16, 2018. You may submit the letter and any other documentation as a pdf document and email it directly to me.

Thank you for your assistance in this matter.

Sincerely,

Magdalena R. Gryglak  
U.S. NRC Region III  
630-829-9875