



September 7, 2018
U.S. Nuclear Regulatory Commission
Region III Materials Licensing Branch
2443 Warrenville Road Suite 210
Lisle, IL 60532-4352
FAX: (630)829-9782

**Office of Chemical, Biological
and Radiation Safety**
4747 Troost Building, Room 003
5100 Rockhill Road
Kansas City, Missouri 64110-2499

Location: 1110 East 48th Street

Office of the Director
Room 003A
816 235-1819

Office of the Assistant Director
Room 001
816 235-1157

Administrative Office
Room 003B
816 235-5241

Health Physicist
Room 23C
816 235-5289

Hazardous Materials
Room 23B
816 235-5363

Hazardous Waste
Room 23D
816 235-1642

Fax 816 235-6559

Attn: Materials Licensing Branch Chief

Subject: Amendment request for license number 24-00513-37

Dear Patricia Pelke:

Please receive this submission of decommissioning action performed at the University of Missouri-Kansas City (License Number 24-00513-37) pertaining to 10CFR30. This information was documented by William Wright, RSO and identifies the sampling of the room numbered 104 in Flarsheim Hall, 5100 Rockhill Rd. KC, MO 64110.

If you have any questions regarding request please contact UMKC's designated Radiation Safety Officer, William Wright, phone number 816-235-6096 or myself.

Thank you for your assistance in this matter.

Sincerely,

William Leutzinger
Director
Department of Environmental Health and Safety
& Worker Compensation
4747 Troost Ave
KC, MO 664110
Ph. 816. 235.1157

License No. 24-00513-37

Enclosure:

RECEIVED SEP 12 2018

NRC FORM 313
(10-2017)
10 CFR 30, 32,
33, 34, 35, 36,
37, 39, and 40



U.S. NUCLEAR REGULATORY COMMISSION

**APPLICATION FOR
MATERIALS LICENSE**

APPROVED BY OMB: NO. 3150-0120

EXPIRES: 06/30/2019

Estimated burden per response to comply with this mandatory collection request: 4.3 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), 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.

INSTRUCTIONS: SEE THE CURRENT VOLUMES OF THE NUREG-1556 TECHNICAL REPORT SERIES ("CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES") FOR DETAILED INSTRUCTIONS FOR COMPLETING THIS FORM: <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1556/>. SEND TWO COPIES OF THE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

MATERIALS SAFETY LICENSING BRANCH
DIVISION OF MATERIAL SAFETY, STATE, TRIBAL AND RULEMAKING PROGRAMS
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-0001

ALL OTHER PERSONS FILE APPLICATIONS 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 APPLICATIONS TO:

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

IF YOU ARE LOCATED IN:

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

MATERIALS LICENSING BRANCH
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 APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
1600 E. LAMAR BOULEVARD
ARLINGTON, TX 76011-4511

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.

1. THIS IS AN APPLICATION FOR (Check appropriate item)

- A. NEW LICENSE
- B. AMENDMENT TO LICENSE NUMBER 24-00513-37
- C. RENEWAL OF LICENSE NUMBER _____

2. NAME AND MAILING ADDRESS OF APPLICANT (Include zip code)

The Curators of the University of Missouri
The Chancellor, University of Missouri-Kansas City
Administrative Center 5115 Oak Street
Kansas City, MO 64110

3. ADDRESS WHERE LICENSED MATERIALS WILL BE USED OR POSSESSED

Volker Campus: 5100 Rockhill Road, Kansas City, MO 64110
Hospital Hill Campus: 24th and Holmes Street, Kansas City, MO 64108

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

William Wright, Health Physicist, RSO

BUSINESS TELEPHONE NUMBER 816-235-6096 BUSINESS CELLULAR TELEPHONE NUMBER _____

BUSINESS E-MAIL ADDRESS
wrightwr@umkc.edu

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL

a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE.

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.

9. FACILITIES AND EQUIPMENT.

10. RADIATION SAFETY PROGRAM.

11. WASTE MANAGEMENT.

12. LICENSE FEES (Fees required only for new applications, with few exceptions*) (See 10 CFR 170 and Section 170.31)

*Amendments/Renewals that increase the scope of the existing license to a new or higher fee category will require a fee.

FEE CATEGORY	AMOUNT ENCLOSED \$

PER THE DEBT COLLECTION IMPROVEMENT ACT OF 1996 (PUBLIC LAW 104-134), YOU ARE REQUIRED TO PROVIDE YOUR TAXPAYER IDENTIFICATION NUMBER. PROVIDE THIS INFORMATION BY COMPLETING NRC FORM 531: <https://www.nrc.gov/reading-rm/doc-collections/forms/nrc531info.html>.

13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 37, 39, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 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.

CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE

William Leutzinger, Director, EHS

SIGNATURE

DATE

9-7-2018

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			\$		
APPROVED BY				DATE	

License # 24-00513-37

Amendment Request

9/7/2018

This is a request to remove room 104 in Flarsheim Hall from the license. Radioactive materials were stored in the room until 2011. A decommissioning survey was performed on 9/4/2018. The entire surface area of the room was scanned using Ludlum 2241-2 SN: 237754, Cal: 1/11/2017 with Ludlum 44-3 NaI SN: 206657 and Ludlum 44-9 Pancake SN: PR251596. Both probes used 1 minute counts in CPM at roughly 1 foot per 4 seconds. In addition to scanning the floor and walls, a chest freezer was scanned inside and out, a table was scanned, and a wipe sample from inside the ventilation system. The NaI probe had a background reading of 2421 CPM and the Pancake probe had a background reading of 45 CPM. All results were indistinguishable from background.

Wipe samples were then taken from various spots around the room and from the chest freezer and ventilation system. The samples were analyzed using a Beckman LSC 6500 #7071352, Cal: 2/21/17 using an H-3 window, a C-14 window, and a wide open window that goes up to 2 MeV. All results were less than 110 DPM/100 cm². The final survey report with scintillation counts is attached separately.

**Report for Decommissioning Survey with Liquid Scintillation
Counts**

RadSafe 25

LAB SURVEY REPORT FH-104 Wright, RSO

- 1. Hoods: N/A
- 2. Lab's Monitoring Equipment: (Make, model, S/N, cal. date): N/A

Checklist: "OK" indicates acceptable.

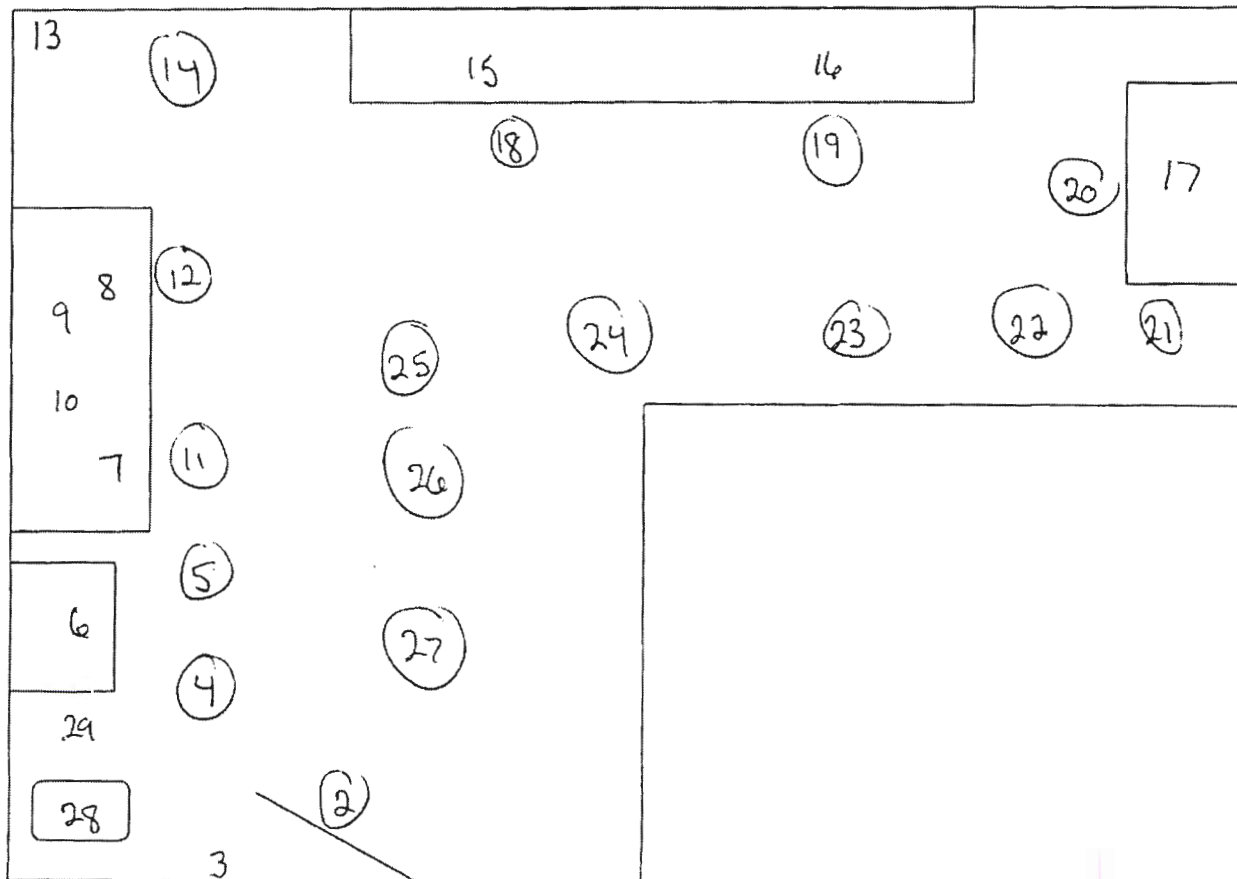
- 3. Records: receipt ___ use ___ storage ___ disposal ___
- 4. Training ___ Authorization ___
- 5. Labeling: containers ___ posting ___ security of stored material ___
- 6. Special equipment present: Freezer

Radiation Survey: Instrument: Ludlum 2241-2 SN: 237754 Cal: 1/11/2017
Probe: Ludlum 44-3 NaI SN: 206657 Background: 2421 CPM; Ludlum 44-9 Pancake SN: PR251596
Background: 45 CPM
Results: No readings above background for both probes

Contamination Survey: Instrument: Beckman LSC 6500 #7071352 Cal: 2/21/17
Results: No readings above background

Notes: This was a decommissioning survey. All readings were indistinguishable from background.

Date of Report: 9/7/2018 By: WRW



ID: 3 CHANNEL

4 SEP 2010 15:06

USER: 2 COMMENT:

PRESET TIME : 2.00

DATA CALC : AUTO DPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : YES IC# : NO REPLICATES : 1 RS232 : OFF

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1

SCINTILLATOR: LIQUID LUMEX: NO LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

ISOTOPE 1: 3H %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

ISOTOPE 2: 14C %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

WIDE OPEN WINDOW %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	3H		14C		WIDE		3H	3H	LUMEX	ELAPSED
				CPM	%ERROR	CPM	%ERROR	CPM	%ERROR	DPM	EFF-1	%	TIME
01	1-1	2.00	-1.4	15.50	35.92	6.50	55.47	27.00	26.26	39.81	30.93	0.16	2.00 - 85
6	1-15	2.00	62.8	7.50	51.64	5.00	63.25	19.50	32.03	-6.36	35.33	2.92	36.45 - 2
7	1-16	2.00	58.0	9.00	47.14	3.50	75.59	22.50	29.81	-6.99	43.69	1.08	39.16
8	1-17	2.00	57.4	11.50	41.70	5.50	60.30	25.00	28.28	-0.66	42.70	0.98	42.10
9	1-18	2.00	66.5	11.00	42.64	3.50	75.59	20.50	31.23	-3.71	46.06	1.13	44.95
10	2-1	2.00	62.4	9.50	45.88	5.00	63.25	19.50	32.03	-2.20	37.42	1.08	47.91
11	2-2	2.00	77.5	7.50	51.64	8.00	50.00	23.00	29.49	-3.99	31.78	0.87	50.76
12	2-3	2.00	80.6	7.00	53.45	6.50	55.47	18.50	32.88	*****	0.00	1.02	53.59
COUNT RATE TOO LOW OR TOO COMPRESSED													
13	2-4	2.00	59.3	12.00	40.82	6.00	57.74	23.50	29.17	1.39	41.40	0.82	56.43
14	2-5	2.00	63.4	11.50	41.70	8.00	50.00	25.50	28.01	-0.43	42.35	0.34	59.29
15	2-6	2.00	59.4	9.50	45.88	7.00	53.45	21.00	30.86	-3.21	38.96	0.91	62.15
16	2-7	2.00	62.1	14.00	37.80	5.00	63.25	26.50	27.47	2.67	46.27	0.78	65.00
17	2-8	2.00	59.1	11.00	42.64	8.00	50.00	24.00	28.87	0.47	39.21	0.77	67.71
18	2-9	2.00	57.8	10.00	44.72	6.50	55.47	23.50	29.17	-2.84	40.40	0.68	70.53
19	2-10	2.00	58.7	13.00	39.22	6.00	57.74	26.50	27.47	0.99	45.48	0.62	73.38
20	2-11	2.00	59.4	7.50	51.64	7.00	53.45	22.50	29.81	-3.26	30.83	0.66	76.21
21	2-12	2.00	59.0	5.00	63.25	4.00	70.71	14.00	37.80	*****	0.00	1.31	79.05
COUNT RATE TOO LOW OR TOO COMPRESSED													
22	2-13	2.00	58.4	11.50	41.70	8.50	48.51	27.00	27.22	3.84	36.59	0.62	81.78
23	2-14	2.00	59.6	7.50	51.64	5.00	63.25	19.50	32.03	-5.89	34.56	0.88	84.50
24	2-15	2.00	58.2	11.00	42.64	4.50	66.67	22.50	29.81	-2.81	44.38	0.65	87.35
25	2-16	2.00	61.1	8.00	50.00	7.50	51.64	19.50	32.03	-7.76	40.35	0.71	90.07
26	2-17	2.00	58.3	7.00	53.45	7.50	51.64	22.00	30.15	-2.51	27.91	0.53	92.80
27	2-18	2.00	57.4	6.50	55.47	7.50	51.64	22.50	29.81	-4.99	28.76	0.57	95.65
28	3-1	2.00	58.0	10.50	43.64	6.00	57.74	24.00	28.87	-0.63	38.95	0.43	98.59
29	3-2	2.00	58.0	10.50	43.64	6.50	55.47	22.50	29.81	-2.03	41.08	0.45	101.42

SAM NO	POS	TIME MIN	H#	3H		14C		WIDE		3H	3H	LUMEX	ELAPSED
				CPM	%ERROR	CPM	%ERROR	CPM	%ERROR	DPM	EFF-1	%	TIME
30	3-3	2.00	58.3	11.50	41.70	8.50	48.51	27.50	26.97	4.89	35.40	0.40	104.16
31	3-4	2.00	58.5	10.50	43.64	5.50	60.30	23.50	29.17	-1.26	39.88	0.45	107.00
32	3-5	2.00	62.5	9.00	47.14	4.00	70.71	19.00	32.44	-6.66	43.00	0.53	109.82
33	3-6	2.00	65.4	8.50	48.51	7.00	53.45	22.00	30.15	-3.89	35.86	0.45	112.68 - 29

Number	Location
1	Background
2	Door/Floor
3	Light Switch
4	Floor
5	Floor
6	Cabinet
7	Freezer Out
8	Freezer Out
9	Freezer In
10	Freezer In
11	Floor
12	Floor
13	Ventilation
14	Floor
15	Table
16	Table
17	Cabinet
18	Floor
19	Floor
20	Floor
21	Floor
22	Floor
23	Floor
24	Floor
25	Floor
26	Floor
27	Floor
28	Cart
29	Barrels



University of Missouri-Kansas City
Office of Chemical, Biological and Radiation Safety
4747 Troost Building, Room 003
5100 Rockhill Road
Kansas City, Missouri 64110-2499



1000



80532

U.S. POSTAGE PAID
FCM 18 ENVY
INDEPENDENCE, MO
64055
SEP 17 18
AMOUNT
\$1.21
R2305K143121-08

U.S. Nuclear Regulatory Commission
Region III Materials Licensing Branch
2443 WARRENVILLE ROAD Suite 210
Lisle, IL 60532-4352

RECEIVED SEP 12 2018

