



February 5, 2018

**Department of Environmental
Health and Safety**

5100 Rockhill Road
Kansas City, Missouri 64110-2499
campus location:
4747 Troost Building, Room 003

Director
816 235-1157

Administrative Assistant II
816 235-5241

Chemical Safety
Coordinator of Haz/Mat
816 235-1882

Technician, Rad/HazMat
816 235-5363

Radiation Safety
Radiation Safety Officer
816 235-5289

Health Physicist
816 235-1844

Waste Management
Sr. Environmental Chemist
816 235-1642

Industrial Safety
Industrial Hygienist
816 235-5241

Fire Safety Inspector III
816 235-1423

**Risk Management and
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Coordinator
816 235-5357

Administrative Assistant
816-235-1623

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U.S. Nuclear Regulatory Commission
ATTN: Materials Licensing Branch Chief
Region III
2443 Warrenville Road
Suite 210
Lisle, IL 60532-4352

Control Number 594583

Subject: Report – Biological Sciences Bldg.

Dear Sir/Madam:

Please receive this submission of decommissioning actions performed at the University of Missouri-Kansas City (License Number 24-00513-37) as requested and pertaining to 10CFR30. This information was documented by William Wright, RSO and identifies the sampling of specific locations on each floor of the university Biological Sciences Building located at 5007 Rockhill Road, Kansas City MO 64110.

If you have any questions regarding this information please feel free to contact us at any time. William Wright, Radiation Safety Officer phone number 816-235-6096, or myself.

Sincerely,

William Leutzinger
Director
Department of Environmental Health and Safety
4747 Troost Ave
KC, MO 64110
Ph. 816.235.1157

License No. 24-00513-37

RECEIVED FEB 07 2018

License # 24-00513-37

Request for Further Information

Amendment Request Dated April 19, 2017

Control # 594583

During phone calls and emails with Dr. Peter Lee he indicated that more measurements and wipe samples needed to be obtained for the four rooms submitted in the earlier amendment request dated April 19, 2017. The rooms in question include BSB 309B, BSB 316, BSB 317, and BSB 408. The additional measurements were taken using a Ludlum 2241-2 GM, SN: 237754, Cal: 1/11/2017 with Ludlum 44-9 pancake, SN: PR251596 and Ludlum 44-3 NaI, SN: 206657. The entirety of all four rooms were surveyed with both probes using one minute counts in CPM at roughly 1 foot per 4 seconds. Background measurements with the pancake probe varied from 40 to 44 CPM depending on the room. Background measurements with the NaI probe varied from 2241 to 3726 CPM depending on the room. All results were indistinguishable from background.

In addition to scanning the entirety of the rooms, wipe samples were taken from various locations including sink p. traps, ventilation systems, and air intakes. These samples were analyzed using the pancake and NaI probes using one minute counts in CPM as well as using a liquid scintillation counter. In addition to analyzing the samples taken, counts were taken with both the GM pancake and NaI probes as close to p. traps and ventilation systems as possible. One minute counts were taken with the pancake probe and the NaI probe. All samples and readings were indistinguishable from background. All samples were counted with a Beckman LSC 6500, SN: 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 sample areas and liquid scintillation counts are attached separately.

Measurements and samples were also taken from the other 14 rooms listed in the last amendment request. These rooms include BSB 204, 206, 207, 218A, 221, 305, 306, 309A, 315, 406, 411, 421, 422B, and 423. Again, samples were taken from various locations including sink p. traps, ventilation systems, and air intakes. All samples were analyzed using the methods described above. Background measurements varied by room, but all results were indistinguishable from background. All but one wipe sample analyzed by liquid scintillation were less than 110 DPM/100 cm². The sample areas and liquid scintillation counts are attached separately.

The one sample that showed removable contamination was taken from the p. trap of a sink inside of a fume hood in room 421. A second sample was taken of the area for confirmation and also showed contamination. Samples were then taken further down the pipe past the p. trap and where the pipe connected to the wall. Those samples came back negative for contamination. The sample were also analyzed using GM pancake and Nal probes and the readings were indistinguishable from background. Finally, the p. trap was analyzed using the pancake and Nal probes and again all readings were indistinguishable from background. The p. trap and pipe were removed from the room and are being stored as radioactive waste. Based on our records, 421 had a history of heavy H-3 use. An analysis of the spectrum of the second sample taken shows no energies past about 200 KeV. Based on history of use, the spectrum, as well as the readings from the probes it is believed that the contamination is from H-3. The sample areas, liquid scintillation counts, and the sample spectrum are attached separately. The first sample is hard to read from the attachment. 3H window is 3047.00 CPM; 14C window is 7.50 CPM; WIDE window is 3060.50 CPM.

Rooms BSB 007, 204A, 309B, 409, and 420 were all surveyed for generally licensed materials. Samples taken from sink p. traps and ventilation systems were analyzed using the methods described above. Extra samples were taken from various areas around all the rooms and were all analyzed using the liquid scintillation counter and pancake and Nal probes. The entirety of all rooms were surveyed using the pancake and Nal probes and all readings were indistinguishable from background. All wipe samples taken were less than 110 DPM/100 cm². Survey reports and liquid scintillation counts are attached separately.

Room BSB 115 had a decommissioning survey performed for a final closeout of the entire building. The entirety of the room was surveyed using a GM pancake probe and a Nal probe using one minute counts in CPM at roughly 1 foot per 4 seconds. Background counts were 41 CPM and 5539 CPM respectively. All readings were indistinguishable from background. Wipe samples were taken from sink p. traps and various other locations around the room. All samples were analyzed with the pancake and Nal probes as well as with liquid scintillation. All samples were indistinguishable from background. All samples were counted on the liquid scintillation counter 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. Final waste removal from the room was performed in 2003. The survey report, liquid scintillation counts, and waste removal are attached separately.

In total, 24 labs were surveyed to various degrees including 5 for generally licensed material. We would like to request that the Biological Sciences Building be officially closed out and removed from our license.

Sample Locations and Liquid Scintillation Results by Floor

Number	Location	Room
1	Background	
2	P. Trap in East Sink 1	204A
3	P. Trap in East Sink 2	204A
4	P. Trap in West Sink 1	204A
5	P. Trap in West Sink 2	204A
6	Hood Ventilation	204A
7	Air Return	204
8	P. Trap in South Sink 1	206
9	P. Trap in South Sink 2	206
10	P. Trap in East Sink 1	206
11	P. Trap in East Sink 2	206
12	P. Trap in West Sink 1	206
13	P. Trap in West Sink 2	206
14	Air Return	206
15	P. Trap In Sink	207
16	Air Return	207
17	P. Trap in West Sink 1	218A
18	P. Trap in West Sink 2	218A
19	P. Trap in East Sink 1	218A
20	P. Trap in East Sink 2	218A
21	Air Return	218A
22	P. Trap in East Sink 1	221
23	P. Trap in East Sink 2	221
24	P. Trap in West Sink 1	221
25	P. Trap in West Sink 2	221
26	Air Return	221

ID:3 CHANNEL

22 JUN 2017 12:09

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 ADC : NO CYCLE REPEATS : 1

SCINTILLATOR: LIQUID LUMEX: NO LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

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

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

WIDE OPEN WINDOW XERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

BAM	POS	TIME	H#	3H		14C		WIDE		3H	3H	LUMEX	ELAPSED
NO		MIN		CPM	XERROR	CPM	XERROR	CPM	XERROR	DPH	EFF-1	%	TIME
B1	1-1	2.00	-0.8	12.00	40.82	2.50	89.44	23.50	29.17	36.97	32.46	0.41	2.56
B2	1-2	2.00	60.9	13.50	38.49	4.50	66.67	22.50	29.81	33.63	40.14	9.44	5.38
B3	1-3	2.00	61.8	17.00	34.30	7.00	53.45	32.50	24.81	46.80	36.33	2.87	8.23
B4	1-4	2.00	61.6	9.00	47.14	7.50	51.64	25.50	28.01	24.99	36.02	2.00	10.96
B5	1-5	2.00	60.0	12.50	40.00	3.00	81.65	22.00	30.15	32.34	38.65	1.53	13.78
B6	1-6	2.00	65.9	8.00	50.00	9.50	45.88	25.50	28.01	*****	0.00	1.05	16.60
COUNT RATE TOO LOW OR TOO COMPRESSED													
B7	1-7	2.00	70.2	8.00	50.00	6.50	55.47	22.00	30.15	23.18	34.52	0.89	19.32
B8	1-8	2.00	70.7	8.00	50.00	9.00	47.14	21.00	30.86	22.44	35.65	1.21	22.05
B9	1-9	2.00	61.7	12.50	40.00	8.00	50.00	26.50	27.47	33.17	37.69	3.10	24.80
B10	1-10	2.00	72.3	6.50	55.47	5.00	63.25	20.00	31.62	22.68	28.66	0.86	27.51
B11	1-11	2.00	62.3	9.00	47.14	8.50	48.51	27.00	27.22	28.49	31.59	0.79	30.35
B12	1-12	2.00	63.9	13.50	38.49	9.50	45.88	28.00	26.73	33.51	40.29	1.32	33.09
B13	1-13	2.00	62.7	14.50	37.14	7.00	53.45	27.50	26.97	29.50	49.15	0.66	35.95
B14	1-14	2.00	65.5	9.00	47.14	5.00	63.25	18.50	32.88	19.24	46.78	0.79	38.68
B15	1-15	2.00	69.8	10.50	43.64	2.50	89.44	17.00	34.30	21.62	48.57	1.44	41.54
B16	1-16	2.00	63.9	11.50	41.70	9.50	45.88	27.50	26.97	33.49	34.34	1.43	44.28
B17	1-17	2.00	65.3	9.50	45.88	6.00	57.74	24.00	28.87	26.50	35.85	0.51	47.13
B18	1-18	2.00	73.2	11.50	41.70	5.50	60.30	23.50	29.17	24.94	46.11	0.53	49.86
B19	2-1	2.00	61.5	7.00	53.45	7.50	51.64	19.50	32.03	21.98	31.85	0.63	52.69
B20	2-2	2.00	61.0	6.00	57.74	7.50	51.64	22.00	30.15	*****	0.00	0.52	55.45
COUNT RATE TOO LOW OR TOO COMPRESSED													
B21	2-3	2.00	67.2	13.00	39.22	11.50	41.70	33.00	24.62	35.24	36.89	0.39	58.17
B22	2-4	2.00	63.9	8.50	48.51	9.50	45.88	26.50	27.47	*****	0.00	0.67	60.88
COUNT RATE TOO LOW OR TOO COMPRESSED													
B23	2-5	2.00	79.0	10.50	43.64	5.50	60.30	24.00	28.87	26.99	38.90	1.35	63.60
B24	2-6	2.00	79.5	7.00	53.45	7.50	51.64	23.00	29.49	*****	0.00	0.51	66.31
COUNT RATE TOO LOW OR TOO COMPRESSED													
B25	2-7	2.00	72.6	7.50	51.64	7.50	51.64	19.00	32.44	22.00	34.09	0.93	69.15
B26	2-8	2.00	63.4	8.00	50.00	5.50	60.30	22.00	30.15	22.74	35.18	0.53	71.90

Blank Average DPM for 3H : 28.29 COEF. OF VAR: 23.728

Number	Location	Room
1	Background	
2	P. Trap in North Sink	306
3	Hood Ventilation	306
4	P. Trap in Hood Sink	306
5	Air Intake	305
6	P. Trap in East Sink 1	309B
7	P. Trap in East Sink 2	309B
8	P. Trap in West Sink 1	309B
9	P. Trap in East Sink 2	309B
10	Air Intake	309B
11	P. Trap in Sink	309
12	P. Trap in West Sink 1	309A
13	P. Trap in West Sink 2	309A
14	P. Trap in East Sink 1	309A
15	P. Trap in East Sink 2	309A
16	Hood Ventilation	309A
17	P. Trap in Hood Sink	309A
18	P. Trap in Sink	316A
19	P. Trap in Sink	316
20	Air Intake	316
21	P. Trap in West Sink 1	317
22	P. Trap in West Sink 2	317
23	P. Trap in East Sink 1	317
24	P. Trap in East Sink 2	317
25	Air Intake	317
2	P. Trap in West Sink 1	315
3	P. Trap in West Sink 2	315
4	P. Trap in Middle Sink 1	315
5	P. Trap in Middle Sink 2	315
6	P. Trap in East Sink 1	315
7	P. Trap in East Sink 2	315
8	P. Trap in East Sink 3	315
9	P. Trap in East Sink 4	315
10	Air Intake	315

COMMENT:

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DATA CALC : AUTO DPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD
COUNT BLANK : YES IC# : NO REPLICATES : 1 RS232 : OFF
TWO PHASE : NO AGC : NO CYCLE REPEATS : 1
SCINTILLATOR: LIQUID LUMEX: NO LOW SAMPLE REJ: 0
LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

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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

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BAM NO	POS	TIME MIN	MO	3H		14C		WIDE		3H DPM	3H EFF-1	LUMEX %	ELAPSED TIME
				CPM	%ERROR	CPM	%ERROR	CPM	%ERROR				
B1	1-1	2.00	-1.3	21.00	30.86	4.50	66.67	30.00	25.82	39.98	52.53	0.22	2.54
B2	1-2	2.00	59.7	14.00	37.80	4.00	70.71	28.00	26.73	43.31	32.32	15.88	5.41
B3	1-3	2.00	73.1	11.50	41.70	6.50	55.47	26.50	27.47	32.49	35.39	0.82	8.15
B4	1-4	2.00	66.5	7.50	51.64	4.00	70.71	16.00	35.36	19.18	39.11	1.09	10.87
B5	1-5	2.00	61.5	8.50	48.51	7.50	51.64	20.50	31.23	23.18	36.67	0.73	13.59
B6	1-6	2.00	64.3	12.00	40.82	6.50	55.47	25.50	28.01	30.98	38.74	1.66	16.44
B7	1-7	2.00	61.6	11.50	41.70	5.00	63.25	22.50	29.81	25.49	45.12	0.66	19.28
B8	1-8	2.00	60.7	14.00	37.80	5.50	60.30	25.50	28.01	32.73	42.77	0.43	22.11
B9	1-9	2.00	70.3	10.50	43.64	12.00	40.82	30.50	25.61	40.47	25.95	0.43	24.83
B10	1-10	2.00	63.4	14.50	37.14	7.50	51.64	30.00	25.82	31.19	46.49	0.59	27.58
B11	1-11	2.00	60.4	8.00	50.00	6.50	55.47	23.00	29.49	24.68	32.42	0.43	30.43
B12	1-12	2.00	66.4	6.50	55.47	7.50	51.64	20.50	31.23	*****	0.00	0.66	33.16
COUNT RATE TOO LOW OR TOO COMPRESSED													
B13	1-13	2.00	67.2	10.50	43.64	5.50	60.30	24.50	28.57	27.92	37.61	0.53	35.88
B14	1-14	2.00	169.0	5.00	63.25	7.00	53.45	18.50	32.88	21.50	23.25	5.90	38.60
B15	1-15	2.00	74.0	8.50	48.51	5.00	63.25	19.50	32.03	23.24	36.57	1.43	41.33
B16	1-16	2.00	77.3	7.50	51.64	6.50	55.47	19.00	32.44	20.75	36.14	0.71	44.06
B17	1-17	2.00	61.6	12.50	40.00	7.50	51.64	28.00	26.73	29.00	43.10	0.38	46.80
B18	1-18	2.00	69.9	7.00	53.45	6.50	55.47	21.50	30.50	20.75	33.73	0.48	49.53
B19	2-1	2.00	67.2	11.50	41.70	9.00	47.14	26.50	27.47	25.25	45.54	0.36	52.47
B20	2-2	2.00	70.9	8.50	48.51	8.50	48.51	24.00	28.87	25.74	33.03	0.81	55.20
B21	2-3	2.00	62.8	11.00	42.64	10.00	44.72	26.50	27.47	26.75	41.12	0.41	57.93
B22	2-4	2.00	67.0	8.50	48.51	7.50	51.64	23.50	29.17	*****	0.00	0.46	60.64
COUNT RATE TOO LOW OR TOO COMPRESSED													
B23	2-5	2.00	63.6	10.50	43.64	5.00	63.25	21.00	30.86	21.25	49.41	0.35	63.40
B24	2-6	2.00	65.4	11.00	42.64	5.50	60.30	25.50	28.01	31.67	34.74	1.13	66.13
B25	2-7	2.00	59.7	11.00	42.64	8.00	50.00	28.50	26.49	29.48	37.32	0.30	68.85
Blank Average DPM for 3H : 28.13 COEF. OF VAR: 23.477													

ID:3 CHANNEL

15 JUN 2017 12:07

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 ADC : 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

BAM NO	POS	TIME MIN	H#	3H		14C		WIDE		3H DPM	3H EFF-1	LUMEX %	ELAPSED TIME
				CPM	%ERROR	CPM	%ERROR	CPM	%ERROR				
B1	1-1	2.00	-1.9	17.50	33.81	2.00	100.00	28.00	26.73	35.73	48.98	0.17	2.65
B2	1-2	2.00	102.7	8.00	50.00	5.00	63.25	18.50	32.88	20.00	39.99	1.28	5.37
B3	1-3	2.00	74.9	6.50	55.47	3.50	75.59	15.50	35.92	16.74	38.82	1.97	8.08
B4	1-4	2.00	61.1	7.00	53.45	7.50	51.64	21.50	30.50	25.24	27.73	0.78	10.91
B5	1-5	2.00	62.2	12.00	40.82	8.00	50.00	28.00	26.73	32.23	37.24	0.46	13.75
B6	1-6	2.00	64.4	8.00	50.00	2.00	100.00	17.50	33.81	18.74	42.69	0.61	16.46
B7	1-7	2.00	63.2	7.00	53.45	5.50	60.30	19.50	32.03	23.73	29.50	0.89	19.30
B8	1-8	2.00	84.6	9.00	47.14	6.50	55.47	22.00	30.15	23.19	38.81	0.65	22.06
B9	1-9	2.00	102.6	11.50	41.70	4.00	70.71	24.00	28.87	39.94	28.79	2.96	24.78
B10	1-10	2.00	68.7	9.00	47.14	9.00	47.14	24.50	28.57	25.24	35.66	0.42	27.49

Blank Average DPM for 3H : 26.08 COEF. OF VAR: 29.050

Number	Location	Room
1	Background	
2	P. Trap In Sink In Hood	406
3	P. Trap in North Sink	406
4	Fume Hood Ventillation	406
5	Fume Hood Ventillation	409
6	P. Trap in East Sink 1	409
7	P. Trap in East Sink 2	409
8	P. Trap in West Sink	409
9	P. Trap in Hood Sink	409
10	P. Trap in North Sink	409
11	P. Trap in South Sink	411
12	P. Trap in East Sink	411
13	P. Trap in West Sink	411
14	P. Trap in Hood Sink	411
15	Fume Hood Ventillation	411
16	P. Trap in West Sink	420
17	P. Trap in East Sink	420
18	P. Trap in East Sink 1	421
19	P. Trap in West Sink 1	421
20	Fume Hood Ventillation	421
21	P. Trap in West Sink 2	421
22	P. Trap in East Sink 2	421
23	P. Trap in North Sink	421
24	P. Trap In Sink	422B
25	Air Return	422B
26	P. Trap in West Sink 1	423
27	P. Trap in West Sink 2	423
28	P. Trap in West Sink 3	423
29	P. Trap in Middle Sink 1	423
30	P. Trap in Middle Sink 2	423
31	P. Trap in Middle Sink 3	423
32	P. Trap in East Sink 1	423
33	P. Trap in East Sink 2	423
34	P. Trap in East Sink 3	423
1	Background	
2	P. Trap in South Sink	408
3	P. Trap in North Sink	408
4	East Air Intake	408
5	West Air Intake	408

COMMENT:

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

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

BAM NO	POS	TIME MIN	HW	3H		14C		WIDE		3H	3H	LUMEX	ELAPSED TIME
				CPM	%ERROR	CPM	%ERROR	CPM	%ERROR	CPM	EFF-1	%	
B1	1-1	2.00	-0.4	18.00	33.33	3.00	81.65	28.00	26.73	36.67	49.09	0.21	2.66
B2	1-2	2.00	59.2	9.00	47.14	7.00	53.45	25.00	28.28	29.73	30.28	1.40	5.39
B3	1-3	2.00	74.6	9.00	47.14	5.50	60.30	19.50	32.03	23.48	38.34	0.89	8.25
B4	1-4	2.00	65.3	8.50	48.51	5.50	60.30	19.50	32.03	20.24	42.00	1.20	10.96
B5	1-5	2.00	70.1	13.00	39.22	4.00	70.71	25.00	28.28	30.96	41.98	2.28	13.70
B6	1-6	2.00	69.1	12.00	40.82	6.50	55.47	24.50	28.57	35.95	33.38	1.29	16.41
B7	1-7	2.00	67.6	8.00	50.00	6.00	57.74	21.00	30.86	21.75	36.78	1.15	19.24
B8	1-8	2.00	70.7	11.50	41.70	7.00	53.45	27.50	26.97	32.73	35.14	0.82	22.00
B9	1-9	2.00	66.6	11.50	41.70	6.50	55.47	26.00	27.74	27.69	41.53	1.07	24.73
B10	1-10	2.00	82.1	7.00	53.45	6.50	55.47	17.50	33.81	18.25	38.35	0.46	27.45
B11	1-11	2.00	65.9	12.00	40.82	6.00	57.74	24.00	28.87	28.24	42.49	0.46	30.18
B12	1-12	2.00	59.4	8.50	48.51	7.50	51.64	23.00	29.49	25.70	33.07	0.66	32.90
B13	1-13	2.00	60.4	7.50	51.64	9.00	47.14	23.00	29.49	25.19	29.77	0.66	35.63
B14	1-14	2.00	79.5	11.50	41.70	8.00	50.00	26.50	27.47	27.25	42.20	0.63	38.36
B15	1-15	2.00	64.4	8.00	50.00	5.50	60.30	19.00	32.44	21.19	37.75	2.98	41.09
B16	1-16	2.00	76.3	10.50	43.64	8.00	50.00	26.50	27.47	31.23	33.62	0.59	43.83
B17	1-17	2.00	60.3	13.00	39.22	2.00	100.00	21.50	30.50	25.74	50.50	0.45	46.70
B18	1-18	2.00	92.2	14.00	37.80	4.00	70.71	26.50	27.47	41.63	33.63	0.40	49.55
B19	2-1	2.00	126.3	14.50	37.14	6.50	55.47	26.50	27.47	35.73	40.58	1.94	52.40
B20	2-2	2.00	61.7	7.00	53.45	8.50	48.51	23.50	29.17	*****	0.00	0.57	55.14
COUNT RATE TOO LOW OR TOO COMPRESSED													
B21	2-3	2.00	65.8	12.50	40.00	8.00	50.00	26.50	27.47	26.74	46.75	0.52	57.91
B22	2-4	2.00	72.3	14.00	37.80	5.50	60.30	27.50	26.97	32.99	42.43	0.71	60.64
B23	2-5	2.00	61.1	12.00	40.82	8.50	48.51	29.00	26.26	36.72	32.68	0.37	63.37
B24	2-6	2.00	102.6	6.00	57.74	8.00	50.00	19.00	32.44	22.98	26.11	0.75	66.22
B25	2-7	2.00	73.3	11.50	41.70	8.00	50.00	29.00	26.26	32.75	35.11	0.28	68.95
B26	2-8	2.00	70.2	11.00	42.64	5.50	60.30	28.00	26.73	31.94	34.44	0.36	71.66
B27	2-9	2.00	66.5	8.00	50.00	7.00	53.45	24.00	28.87	24.75	32.32	0.37	74.38
B28	2-10	2.00	90.6	8.00	50.00	7.50	51.64	27.50	26.9				

ID:3 CHANNEL

12 JUN 2017 14:59

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	POS	TIME	H#	3H		14C		WIDE		3H	3H	LUMEX	ELAPSED
				CPM	%ERROR	CPM	%ERROR	CPM	%ERROR				
B1	1-1	2.00	-1.0	18.00	33.33	3.50	75.59	32.50	24.81	43.20	41.67	0.14	2.65
B2	1-2	2.00	139.2	11.50	41.70	8.50	48.51	26.00	27.74	34.74	33.10	0.72	5.47
B3	1-3	2.00	71.6	11.50	41.70	6.00	57.74	26.00	27.74	27.68	41.55	2.95	8.29
B4	1-4	2.00	81.5	11.00	42.64	8.50	48.51	24.00	28.87	31.93	34.45	1.97	11.13
B5	1-5	2.00	78.0	13.50	38.49	8.50	48.51	27.50	26.97	29.24	46.17	1.67	13.98

Blank Average DPM for 3H : 33.36 COEF. OF VAR: 18.360

**Contamination Sample Locations, Liquid Scintillation
Results, and Sample Spectrum**

Number	Location	Room
1	Background	
2	P. Trap In Sink In Hood	421
1	Background	
2	P. Trap In Sink In Hood	421
3	Pipe Past P. Trap	421
4	Pipe Connection to Wall	421

ID:3 CHANNEL

9 JUN 2017 14:33

USER: 2 COMMENT:

PRESET TIME : 2.00

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

COUNT BLANK : YES ICH : NO REPLICATES : 1 RS232 : OFF

TWO PHASE : NO AGC : 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	HW	3H		14C		WIDE		3H DPM	3H EFF-1	LUMEX %	ELAPSED TIME
				CPM	%ERROR	CPM	%ERROR	CPM	%ERROR				
B1	1-1	2.00	-0.6	15.50	35.30	4.00	70.71	26.50	27.47	33.22	46.66	0.54	2.00
BWS	2-10	2.00	114.0	3047.00	2.56	4.00	51.01	1000.50	2.56	7581.95	46.13	0.01	2.00

ID:3 CHANNEL

11 JUN 2017 09:21

USER: 2 COMMENT:

PRESET TIME : 2.00

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

COUNT BLANK : YES ICH : NO REPLICATES : 1 RS232 : OFF

TWO PHASE : NO AGC : 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

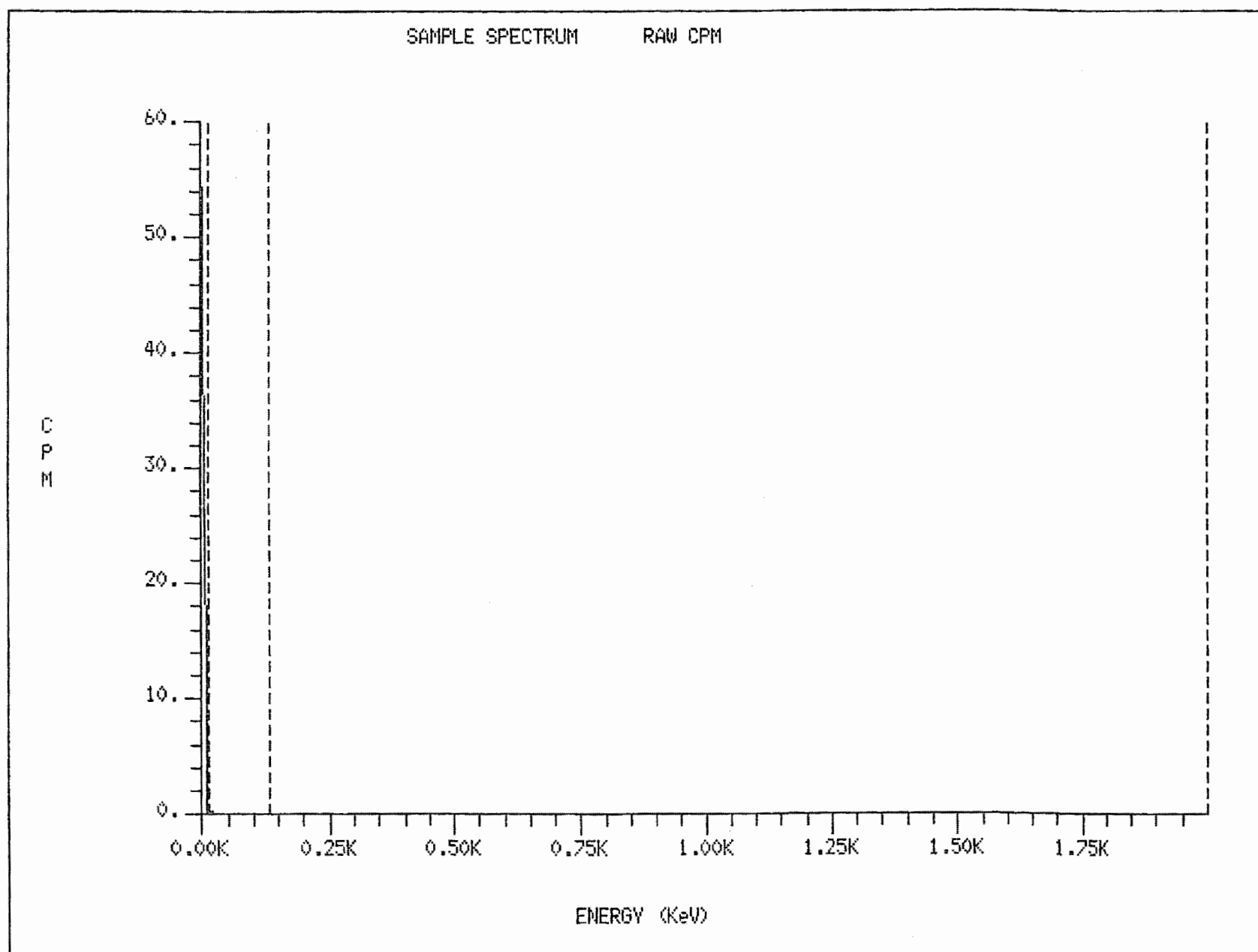
ISOTOPE 2: 14C %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

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

SAM NO	POS	TIME MIN	HW	3H		14C		WIDE		3H DPM	3H EFF-1	LUMEX %	ELAPSED TIME
				CPM	%ERROR	CPM	%ERROR	CPM	%ERROR				
B1	1-1	2.00	-1.3	14.00	37.80	9.00	47.14	26.00	26.73	32.42	43.19	0.01	2.00
B2	1-2	2.00	98.0	878.50	4.77	2.50	89.44	885.50	4.75	1904.13	46.14	0.12	2.00
B3	1-3	2.00	66.9	32.00	25.00	7.00	53.45	46.50	20.74	76.60	41.78	0.95	2.00
B4	1-4	2.00	70.7	23.00	25.49	6.00	57.74	40.00	22.36	76.63	30.01	0.82	10.00

User: 2 Sample: B2 Position: 1-2

13 JUN 2017 14:36



**Survey Reports with Liquid Scintillation Counts for Generally
Licensed Materials Rooms**

RadSafe 12**LAB SURVEY REPORT BSB 007**

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

Checklist: "OK" indicates acceptable.

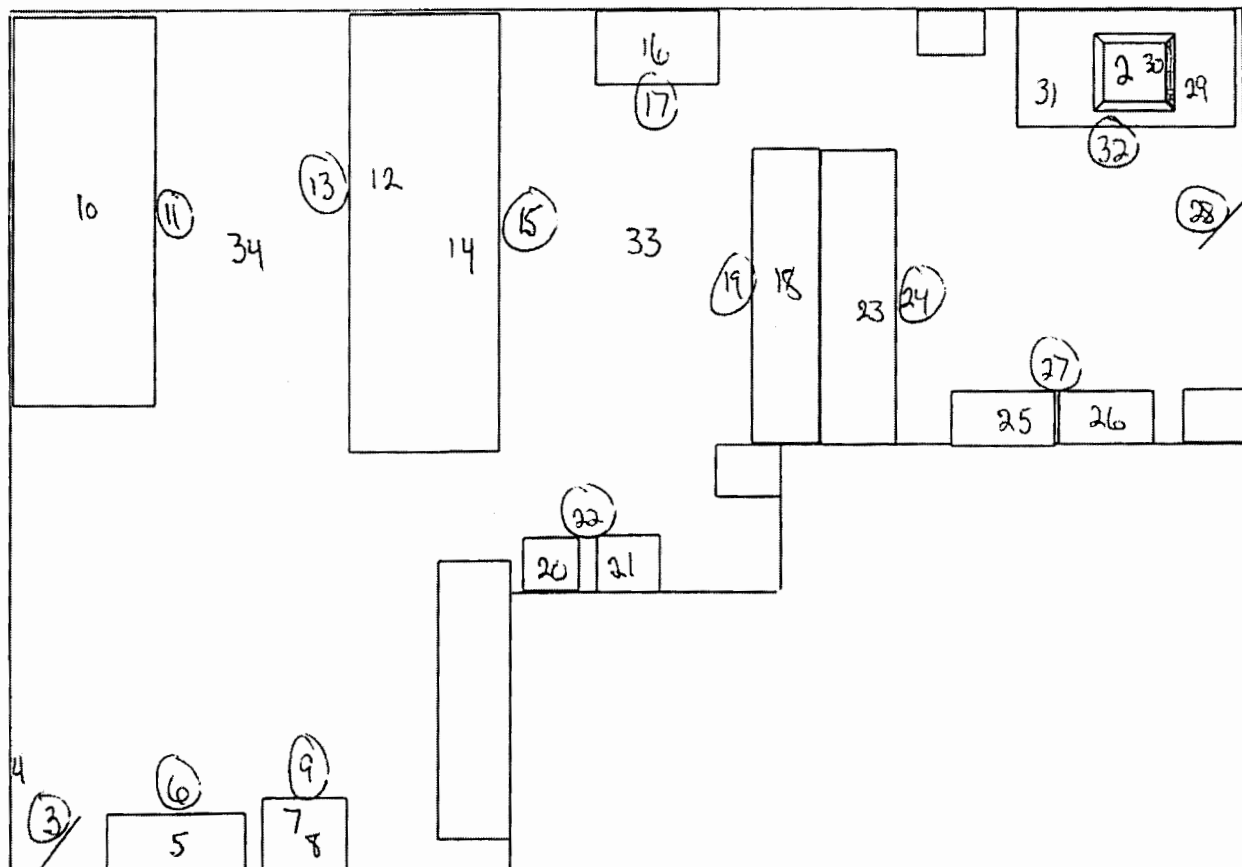
3. Records: receipt_N/A__use_N/A__storage_N/A__disposal_N/A__
4. Training_N/A__ Authorization_N/A__
5. Labeling: containers_N/A__ posting_N/A__ security of stored material_N/A__
6. Special equipment present N/A

Radiation Survey: Instrument: Ludlum 2241-2 SN: 237754 Cal: 1/11/2017
Probe: Ludlum 44-3 NaI SN: 206657 Background: 3642 CPM; Ludlum 44-9 Pancake SN: PR251569
Background: 42 CPM
Results: All results indistinguishable from background

Contamination Survey: Instrument: Beckman LSC 6500 #7071352 Cal: 2/21/17
Results: All swipes less than 100 DPM/100 cm-sq

Notes: Nothing found above background with any probe or instrument

Date of Report: 7/20/17 By: William Wright



Number	Location
1	Background
2	P. Trap in Sink
3	Door/Floor
4	Light Switch
5	Bench Top
6	Floor
7	Freezer Out
8	Freezer In
9	Floor
10	Bench Top
11	Floor
12	Bench Top
13	Floor
14	Bench Top
15	Floor
16	Bench Top
17	Floor
18	Bench Top
19	Floor
20	Flammable Cabinet
21	Acid Cabinet
22	Floor
23	Bench Top
24	Floor
25	Bench Top
26	Bench Top
27	Floor
28	Door/Floor
29	Bench Top
30	Sink
31	Bench Top
32	Floor
33	Vent
34	Vent

ID:3 CHANNEL

19 JUL 2017 13:01

USER: 2

COMMENT:

PRESET TIME : 2.00

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

COUNT BLANK : YES ICH : NO REPLICATES : 1 RS232 : OFF

TWO PHASE : NO AGC : NO CYCLE REPEATS : 1

SCINTILLATOR: LIQUID LUMEX: NO LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

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

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

WIDE OPEN WINDOW XERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	3H		14C		WIDE		3H	3H	LUMEX	ELAPSED TIME
				CPM	XERROR	CPM	XERROR	CPM	XERROR	DPM	EFF-1	%	
1	3-8	2.00	59.1	9.50	45.88	6.50	55.47	23.50	29.17	-2.35	37.68	0.53	120.51
2	3-9	2.00	59.6	14.50	37.14	4.50	66.67	29.00	26.26	*****	0.00	0.42	123.26
COUNT RATE TOO LOW OR TOO COMPRESSED													
3	3-10	2.00	56.0	8.50	48.51	9.00	47.14	21.50	30.50	1.53	29.21	0.56	126.11
4	3-11	2.00	57.6	7.50	51.64	9.00	47.14	24.50	28.57	2.69	24.78	0.48	128.96
5	3-12	2.00	58.0	11.50	41.70	5.50	60.30	26.50	27.47	5.17	35.12	0.45	131.78
6	3-13	2.00	55.6	11.50	41.70	7.00	53.45	24.00	28.87	-1.35	43.86	0.53	134.51
7	3-14	2.00	57.1	7.00	53.45	6.50	55.47	21.00	30.86	-8.02	35.81	0.55	137.34
8	3-15	2.00	58.0	6.50	55.47	3.00	81.65	20.50	31.23	-0.41	23.93	0.63	140.19
9	3-16	2.00	58.3	6.50	55.47	5.50	60.30	17.00	34.30	-2.12	25.54	0.77	142.93
10	3-17	2.00	58.1	13.50	38.49	6.00	57.74	26.50	27.47	1.09	47.11	0.53	145.78
11	3-18	2.00	59.2	5.00	63.25	6.00	57.74	16.00	35.36	-9.96	28.40	0.82	148.60
12	4-1	2.00	58.6	9.00	47.14	3.00	81.65	21.50	30.50	-6.91	43.57	0.57	151.43
13	4-2	2.00	57.1	8.50	48.51	9.00	47.14	25.50	28.01	2.15	28.60	0.46	154.15
14	4-3	2.00	58.4	8.50	48.51	6.00	57.74	20.50	31.23	-5.41	38.36	0.53	156.84
15	4-4	2.00	57.1	12.50	40.00	6.50	55.47	25.00	28.28	-1.41	47.79	0.47	159.56
16	4-5	2.00	57.6	14.50	37.14	5.50	60.30	29.00	26.26	5.13	44.34	0.45	162.31
17	4-6	2.00	56.5	11.00	42.64	7.50	51.64	24.50	28.57	-2.46	43.81	0.51	165.04
18	4-7	2.00	58.6	5.50	60.30	6.00	57.74	19.50	32.03	-5.41	24.82	0.64	167.77
19	4-8	2.00	56.0	8.00	50.00	5.00	63.25	20.00	31.62	-8.52	42.00	0.57	170.62
20	4-9	2.00	56.8	9.00	47.14	6.00	57.74	22.00	30.15	-5.32	40.45	0.47	173.31
21	4-10	2.00	57.7	7.50	51.64	4.50	66.67	19.00	32.44	-9.02	40.44	0.54	176.15
22	4-11	2.00	60.0	8.50	48.51	6.00	57.74	18.50	32.88	-4.91	37.52	0.63	179.00
23	4-12	2.00	58.5	11.00	42.64	4.50	66.67	21.00	30.86	5.04	33.73	0.47	181.83
24	4-13	2.00	59.6	14.00	37.80	7.00	53.45	27.50	26.97	2.59	46.42	0.42	184.70
25	4-14	2.00	57.6	9.50	45.88	3.50	75.59	22.50	29.81	-5.02	42.13	0.44	187.54
26	4-15	2.00	57.0	8.50	48.51	6.50	55.47	24.50	28.57	-3.32	35.05	0.37	190.40
27	4-16	2.00	59.3	8.00	50.00	5.00	63.25	18.50	32.88	-2.87	32.38	0.58	193.13
28	4-17	2.00	59.4	10.00	44.72	5.00	63.25	25.00	28.28	2.19	33.60	0.42	195.85
29	4-18	2.00	55.9	15.50	35.92	4.50	66.67	26.50	27.47	1.04	54.18	0.31	198.70
30	5-1	2.00	58.6	8.50	48.51	4.50	66.67	19.00	32.44	-2.72	34.21	0.32	201.64
31	5-2	2.00	65.2	8.50	48.51	10.00	44.72	25.00	28.28	2.68	28.10	0.26	204.49
32	5-3	2.00	56.5	4.50	66.67	6.00	57.74	19.00	32.44	-2.24	17.77	0.34	207.20
33	5-4	2.00	55.9	10.50	43.64	10.00	44.72	24.00	28.87	-0.97	39.48	0.25	209.95
34	5-5	2.00	56.4	12.50	40.00	5.50	60.30	25.50	28.01	1.59	42.87	0.24	212.67

RadSafe 12 LAB SURVEY REPORT BSB 204A

1. Hoods: Y
2. Lab's Monitoring Equipment: (Make, model, S/N, cal. date) N/A Generally Licensed materials only

Checklist: "OK" indicates acceptable.

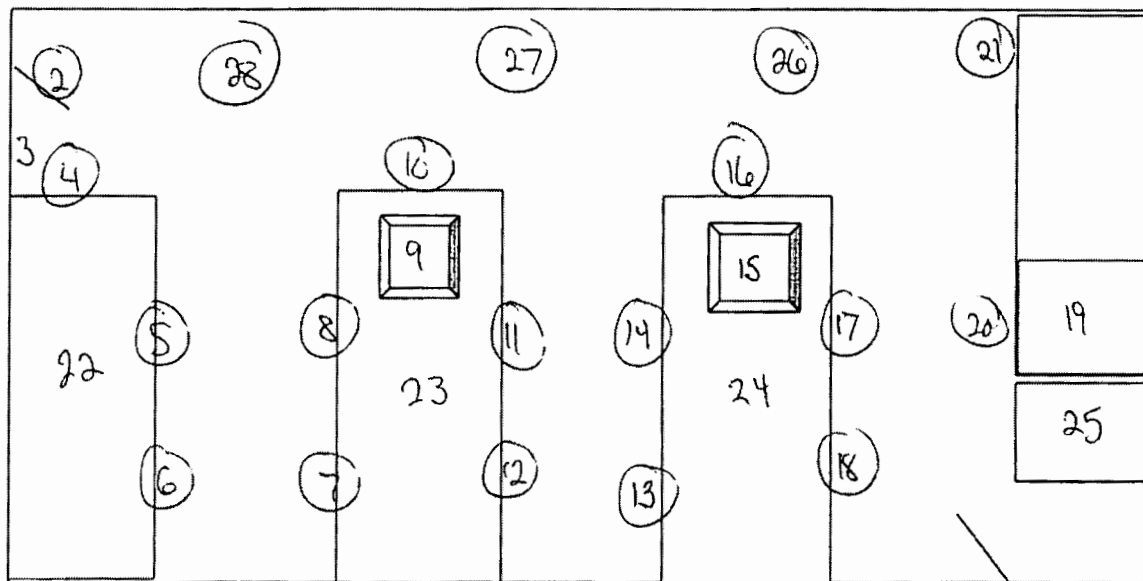
3. Records: receipt N/A__ use N/A__ storage N/A__ disposal N/A__
4. Training N/A__ Authorization N/A__
5. Labeling: containers N/A__ posting N/A__ security of stored material N/A__
6. Special equipment present N/A

Radiation Survey: Instrument: Ludlum 2241-2 SN: 237754 Cal: 1/11/2017
Probe: Ludlum 44-3 NaI SN: 206657 Background: 3432 CPM; Ludlum 44-9 Pancake SN: PR251569
Background: 41 CPM
Results: All results indistinguishable from background

Contamination Survey: Instrument: Beckman LSC 6500 #7071352 Cal: 2/21/17
Results: All swipes less than 110 DPM/100 cm-sq

Notes: Nothing found above background with any probe or instrument

Date of Report: 6/23/17 By: William Wright



Number	Location
1	Background
2	Door/Floor
3	Light Switch
4	Floor
5	Floor
6	Floor
7	Floor
8	Floor
9	Sink
10	Floor
11	Floor
12	Floor
13	Floor
14	Floor
15	Sink
16	Floor
17	Floor
18	Floor
19	Hood
20	Floor
21	Floor
22	Bench Top
23	Bench Top
24	Bench Top
25	Bench Top
26	Floor
27	Floor
28	Floor

ID:3 CHANNEL

22 JUN 2017 12:09

USER: 2

COMMENT:

PRESET TIME : 2.00

DATA CALC : AUTO DPM HH : YES SAMPLE REPEATS: 1 PRINTER : STD

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

TWO PHASE : NO ADC : NO CYCLE REPEATS : 1

SCINTILLATOR: LIQUID LUMEX: NO LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

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

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

WIDE OPEN WINDOW XERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM	POS	TIME	HH	3H		14C		WIDE		3H		LUMEX	ELAPSED
				CPM	XERROR	CPM	XERROR	CPM	XERROR	CPM	EFF-1	%	TIME
1	2-10	2.00	67.2	6.50	55.47	5.00	63.25	19.50	32.03	-6.61	29.99	1.20	74.68
2	2-11	2.00	56.5	12.00	40.82	6.50	55.47	23.00	29.49	-4.54	50.52	0.85	77.53
3	2-12	2.00	76.7	7.50	51.64	5.50	60.30	21.00	30.86	-6.05	33.73	0.97	80.26
4	2-13	2.00	67.0	8.50	48.51	5.50	60.30	20.00	31.62	0.02	30.03	1.13	82.99
5	2-14	2.00	75.7	12.00	40.82	6.00	57.74	26.50	27.47	4.87	36.18	0.83	85.71
6	2-15	2.00	64.7	12.00	40.82	5.00	63.25	22.50	29.81	-1.55	44.88	0.98	88.43
7	2-16	2.00	78.3	9.50	45.88	3.00	81.65	20.00	31.62	-2.08	36.24	1.45	91.18
8	2-17	2.00	69.0	11.00	42.64	6.50	55.47	22.00	30.15	0.19	38.63	0.72	93.90
9	2-18	2.00	73.6	10.00	44.72	8.50	48.51	22.50	29.81	*****	0.00	1.03	96.61
COUNT RATE TOO LOW OR TOO COMPRESSED													
10	3-1	2.00	67.2	12.50	40.00	9.50	45.88	28.00	26.73	0.42	43.53	0.70	99.55
11	3-2	2.00	70.1	7.50	51.64	4.50	66.67	19.50	32.03	*****	0.00	1.05	102.41
COUNT RATE TOO LOW OR TOO COMPRESSED													
12	3-3	2.00	79.3	12.00	40.82	5.00	63.25	26.50	27.47	0.21	42.10	0.64	105.14
13	3-4	2.00	74.2	13.50	38.49	4.50	66.67	22.50	29.81	-2.60	52.55	0.98	107.88
14	3-5	2.00	71.5	8.50	48.51	8.50	48.51	25.00	28.28	-1.30	31.49	0.88	110.59
15	3-6	2.00	76.8	4.50	66.67	6.00	57.74	17.00	34.30	-11.54	26.86	1.32	113.45
16	3-7	2.00	68.3	10.50	43.64	4.50	66.67	19.50	32.03	-3.07	41.62	0.84	116.19
17	3-8	2.00	75.3	10.00	44.72	8.00	50.00	27.50	26.97	2.95	32.01	0.65	118.95
18	3-9	2.00	64.6	12.00	40.82	8.00	50.00	28.00	26.73	2.96	38.40	0.52	121.69
19	3-10	2.00	85.7	8.50	48.51	8.00	50.00	25.00	28.28	-2.35	32.77	0.91	124.54
20	3-11	2.00	97.0	6.50	55.47	8.50	48.51	19.50	32.03	-7.54	31.32	0.74	127.26
21	3-12	2.00	73.2	9.50	45.88	7.50	51.64	26.50	27.47	-1.05	34.88	0.57	130.02
22	3-13	2.00	60.4	5.50	60.30	8.00	50.00	18.50	32.88	-9.55	29.35	0.52	132.73
23	3-14	2.00	63.7	10.50	43.64	7.50	51.64	26.50	27.47	-1.85	39.71	0.43	135.58
24	3-15	2.00	62.8	12.00	40.82	6.50	55.47	26.00	27.74	1.93	39.70	0.47	138.31
25	3-16	2.00	68.8	8.00	50.00	4.50	66.67	20.50	31.23	*****	0.00	0.67	141.14
COUNT RATE TOO LOW OR TOO COMPRESSED													
26	3-17	2.00	71.3	11.50	41.70	7.50	51.64	25.50	28.01	-1.05	42.22	0.55	144.00
27	3-18	2.00	83.9	12.50	40.00	6.50	55.47	28.50	26.49	9.69	32.91	0.51	146.85
28	4-1	2.00	78.7	15.00	36.51	6.50	55.47	29.00	26.26	9.16	44.84	0.44	149.70

RadSafe 12 LAB SURVEY REPORT BSB 409

1. Hoods: Yes
2. Lab's Monitoring Equipment: (Make, model, S/N, cal. date)--- N/A Generally Licensed materials only
Checklist: "OK" indicates acceptable.
3. Records: receipt N/A use N/A storage N/A disposal N/A 4. Training N/A Authorization N/A
5. labeling: containers N/A posting N/A security of stored material N/A
6. Special equipment present N/A

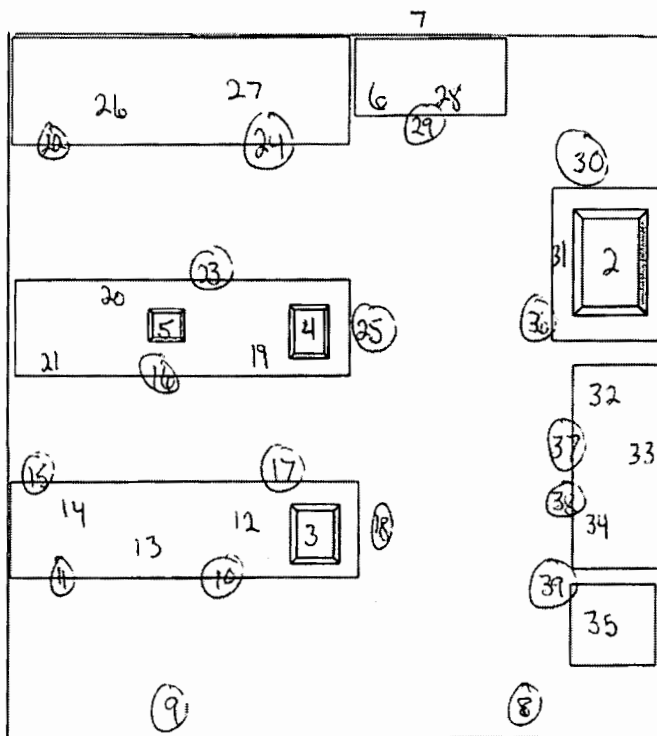
Radiation Survey: Instrument: Ludlum 2241-2 SN: 237754 Cal: 1/11/2017
Probe: Ludlum 44-3 NaI SN: 206657 Background: 2444 CPM; Ludlum 44-9 Pancake SN: PR251596
Background: 60 CPM
Results: All results indistinguishable from background

Contamination Survey: Instrument: Beckman LSC 6500 #7071352 Cal: 2/21/17
Results: All swipes less than 110 dpm/100 cm-sq

Notes: Nothing found above background with any probe or instrument.

Date: 6/11/17

By: William Wright



Number	Location
1	Background
2	P. Trap In Sink
3	P. Trap In Sink
4	P. Trap In Sink
5	P. Trap In Sink
6	P. Trap In Sink In Hood
7	Hood Ventillation
8	Floor
9	Floor
10	Floor
11	Floor
12	Bench Top
13	Bench Top
14	Bench Top
15	Floor
16	Floor
17	Floor
18	Floor
19	Bench Top
20	Bench Top
21	Bench Top
22	Floor
23	Floor
24	Floor
25	Floor
26	Bench Top
27	Bench Top
28	Hood
29	Floor
30	Floor
31	Bench Top
32	Bench Top
33	Bench Top
34	Bench Top
35	Shelf
36	Floor
37	Floor
38	Floor
39	Floor

ID:3 CHANNEL

9 JUN 2017 14:02

USER: 2

COMMENT:

PRESET TIME : 2.00

DATA CALC : AUTO DPM HM :YES SAMPLE REPEATS: 1 PRINTER : STD

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

TWO PHASE : NO ADC : 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: 0.02 FACTOR: 1.000000 BKG. SUB: 0

WIDE OPEN WINDOW ERROR: 0.20 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	HM	3H		14C		WIDE		3H DPM	3H EFF-1	LUMEX %	ELAPSED TIME
				CPM	%ERROR	CPM	%ERROR	CPM	%ERROR				
81	1-1	2.00	40.6	15.50	35.32	4.00	70.71	26.50	27.47	33.22	46.66	0.54	2.64
814	1-14	2.00	33.7	3.50	45.08	7.50	51.64	25.50	28.01	26.40	30.86	1.11	38.43
815	1-15	2.00	65.2	10.50	43.64	6.50	48.51	34.50	24.02	39.40	26.51	0.57	41.15
816	1-16	2.00	67.3	11.00	42.64	6.50	48.51	26.50	27.47	*****	0.00	0.71	42.68
COUNT RATE TOO LOW OR TOO COMPRESSED													
817	1-17	2.00	53.9	0.00	50.00	7.50	51.64	22.50	29.51	*****	0.00	0.66	46.53
COUNT RATE TOO LOW OR TOO COMPRESSED													
818	1-18	2.00	66.3	9.00	47.14	9.50	42.51	23.00	29.43	*****	0.00	0.75	49.55
COUNT RATE TOO LOW OR TOO COMPRESSED													
819	2-1	2.00	77.9	13.50	40.00	7.50	51.64	27.00	27.82	31.44	39.76	1.05	52.17
94	10-1	2.00	60.6	13.50	40.00	7.50	51.64	23.00	29.43	-193.94	30.86	0.64	191.50
95	10-2	2.00	56.2	7.50	51.64	7.50	51.64	23.00	29.49	-195.90	30.86	0.52	394.25
96	10-3	2.00	50.5	7.50	51.64	7.50	51.64	19.50	32.03	-196.94	34.13	0.62	396.36
97	10-4	2.00	56.5	7.00	53.45	6.50	55.47	21.00	30.96	-198.66	34.57	0.50	399.57
98	10-5	2.00	76.9	10.00	44.72	6.50	55.47	26.00	27.74	-191.18	36.85	0.45	402.41
99	10-6	2.00	58.6	8.50	48.51	7.00	53.45	22.50	29.51	-193.94	34.03	0.58	405.17
100	10-7	2.00	58.2	8.50	48.51	7.00	53.45	26.00	27.74	-189.93	29.32	0.50	408.00
101	10-8	2.00	59.4	10.00	44.72	7.00	53.45	23.50	28.01	-192.66	30.06	0.44	410.74
102	10-9	2.00	58.2	11.00	42.64	3.00	63.25	25.00	26.20	-192.94	42.35	0.46	413.57
103	10-10	2.00	58.3	10.50	43.64	11.50	41.70	26.50	27.47	-185.94	31.84	0.42	416.33
104	10-11	2.00	59.9	9.50	45.88	6.50	55.47	24.50	28.57	-186.71	29.50	0.46	419.04
105	10-12	2.00	60.3	13.50	40.00	5.00	63.25	24.50	28.57	-190.47	43.05	0.53	421.86
106	10-13	2.00	61.9	3.50	45.88	5.50	60.30	23.00	29.45	-196.16	41.76	0.61	424.53
107	10-14	2.00	57.8	11.50	41.72	7.50	51.64	25.50	28.01	-192.68	43.83	0.45	427.36
108	10-15	2.00	58.1	8.50	48.51	6.50	55.47	24.00	28.27	-194.68	35.07	0.56	430.11
109	10-16	2.00	58.8	7.00	53.45	2.50	48.51	22.00	30.15	-196.68	31.48	0.54	432.84
110	10-17	2.00	57.4	13.50	40.00	3.00	57.74	24.50	28.57	-190.72	44.34	0.55	435.63
111	10-18	2.00	57.0	9.00	47.14	6.00	57.74	21.00	30.86	-196.18	35.58	0.66	438.46
112	11-1	2.00	57.4	10.50	43.64	5.50	45.88	23.00	29.43	-190.63	27.20	0.60	441.28
113	11-2	2.00	57.2	10.00	44.72	6.00	57.74	21.50	30.50	-193.16	38.63	0.68	444.03
114	11-3	2.00	57.8	3.00	47.14	8.50	48.51	25.00	28.28	-193.68	35.06	0.52	446.75
115	11-4	2.00	57.5	3.00	47.14	7.50	51.64	23.00	29.49	-195.18	37.91	0.57	449.47
116	11-5	2.00	53.4	8.00	57.74	3.00	63.25	16.50	34.82	-200.41	32.42	0.83	452.32
117	11-6	2.00	56.7	7.50	51.64	3.50	48.51	22.50	29.51	-195.18	31.02	0.61	455.05
118	11-7	2.00	57.5	12.50	40.00	5.00	63.25	23.50	29.17	-192.54	47.39	0.61	457.79
119	11-8	2.00	56.5	12.00	40.22	5.50	62.30	27.00	27.22	-190.43	42.12	0.53	460.55
120	11-9	2.00	57.0	9.50	45.88	6.00	57.74	21.50	30.50	-197.18	43.70	0.69	463.31
121	11-10	2.00	57.7	5.50	55.47	7.50	51.64	19.00	32.44	-197.43	30.25	0.78	466.17
122	11-11	2.00	56.5	8.50	48.51	8.50	48.51	26.00	27.74	-190.43	29.04	0.53	468.93
123	11-12	2.00	58.2	10.00	33.22	4.50	66.67	21.50	30.50	-195.04	54.44	0.65	471.66
124	11-13	2.00	59.7	6.50	48.51	6.00	57.74	25.00	28.28	*****	0.00	0.58	474.43
COUNT RATE TOO LOW OR TOO COMPRESSED													
125	11-14	2.00	60.2	9.00	47.14	4.50	66.67	20.00	31.62	-194.69	37.15	0.78	477.18

RadSafe 12 LAB SURVEY REPORT BSB 420

1. Hoods: No
2. Lab's Monitoring Equipment: (Make, model, S/N, cal. date)--- N/A Generally Licensed materials only
Checklist: "OK" indicates acceptable.
3. Records: receipt N/A use N/A storage N/A disposal N/A 4. Training N/A Authorization N/A
5. labeling: containers N/A posting N/A security of stored material N/A
6. Special equipment present N/A

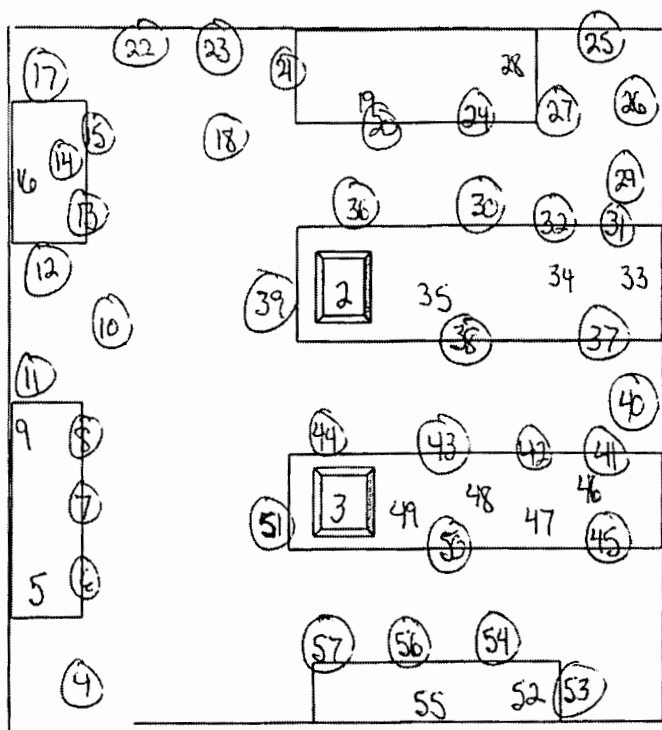
Radiation Survey: Instrument: Ludlum 2241-2 SN: 237754 Cal: 1/11/2017
Probe: Ludlum 44-3 NaI SN: 206657 Background: 2321 CPM; Ludlum 44-9 Pancake SN: PR251596
Background: 55 CPM
Results: All results indistinguishable from background.

Contamination Survey: Instrument: Beckman LSC 6500 #7071352 Cal: 2/21/17
Results: All swipes less than 110 dpm/100 cm-sq

Notes: Nothing found above background with any probe or instrument

Date: 6/11/17

By: William Wright



Number	Location	Number	Location
1	Background	47	Bench Top
2	P. Trap In Sink	48	Bench Top
3	P. Trap In Sink	49	Bench Top
4	Floor	50	Floor
5	Bench Top	51	Floor
6	Floor	52	Bench Top
7	Floor	53	Floor
8	Floor	54	Floor
9	Bench Top	55	Bench Top
10	Floor	56	Floor
11	Floor	57	Floor
12	Floor		
13	Floor		
14	Floor		
15	Floor		
16	Bench Top		
17	Floor		
18	Floor		
19	Bench Top		
20	Floor		
21	Floor		
22	Floor		
23	Floor		
24	Floor		
25	Floor		
26	Floor		
27	Floor		
28	Bench Top		
29	Floor		
30	Floor		
31	Floor		
32	Floor		
33	Bench Top		
34	Bench Top		
35	Bench Top		
36	Floor		
37	Floor		
38	Floor		
39	Floor		
40	Floor		
41	Floor		
42	Floor		
43	Floor		
44	Floor		
45	Floor		
46	Bench Top		

ID:3 CHANNEL

9 JUN 2017 14:29

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 ADC : 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

BAM	POS	TIME	H#	3H		14C		WIDE		3H	3H	LUMEX	ELAPSED
NO		MIN		CPM	%ERROR	CPM	%ERROR	CPM	%ERROR	DPM	EFF-1	%	TIME
B1	1-1	2.00	-0.6	15.50	35.92	4.00	70.71	25.50	27.47	33.22	46.66	0.54	2.64
B5	1-5	2.00	59.0	10.50	43.64	5.50	60.30	23.50	29.17	26.49	39.64	1.58	13.69
B6	1-6	2.00	73.9	11.00	42.64	5.00	63.25	23.50	29.17	23.24	47.34	1.54	16.51
1	3-16	2.00	61.8	12.00	40.82	6.00	57.74	24.00	28.87	-191.94	44.48	0.65	140.68
2	3-17	2.00	59.1	7.50	51.64	5.50	60.30	20.50	31.23	-192.95	28.89	0.60	143.43
3	3-18	2.00	58.8	6.50	55.47	7.50	51.64	21.50	30.50	-196.98	29.63	0.58	146.20
4	4-1	2.00	58.6	5.00	63.25	8.50	48.51	18.50	32.08	-199.48	25.72	0.59	149.03
5	4-2	2.00	57.1	11.50	41.70	5.00	63.25	22.00	30.15	-192.65	43.77	0.48	151.85
6	4-3	2.00	56.3	8.00	50.00	6.00	57.74	19.00	32.44	-197.43	37.23	0.57	154.60
7	4-4	2.00	56.9	9.00	47.14	8.50	48.51	24.50	28.57	-192.94	34.65	0.47	157.33
8	4-5	2.00	58.6	12.00	40.82	5.50	60.30	24.00	28.87	-187.69	36.43	0.49	160.08
9	4-6	2.00	56.3	13.00	39.22	4.50	66.67	23.00	29.43	-195.16	54.73	0.42	162.79
10	4-7	2.00	60.1	9.00	47.14	4.50	66.67	18.00	33.33	*****	0.00	0.69	165.52
COUNT RATE TOO LOW OR TOO COMPRESSED													
11	4-8	2.00	61.9	6.50	55.47	5.50	60.30	20.50	31.23	*****	0.00	0.56	168.25
COUNT RATE TOO LOW OR TOO COMPRESSED													
12	4-9	2.00	57.2	9.50	45.88	7.00	53.45	26.00	27.74	-191.94	35.22	0.36	170.99
13	4-10	2.00	57.5	11.50	41.70	4.50	66.67	25.50	28.01	-193.16	44.66	0.38	173.74
14	4-11	2.00	57.1	14.50	37.14	6.50	55.47	28.50	26.49	-184.45	42.07	0.31	176.46
15	4-12	2.00	59.5	7.00	53.45	4.50	66.67	21.00	30.06	-194.66	28.86	0.56	179.19
16	4-13	2.00	63.0	8.50	48.51	8.50	48.51	25.50	28.01	-189.18	28.58	0.46	181.91
17	4-14	2.00	63.1	10.00	44.72	5.50	60.30	21.50	30.50	-195.60	43.03	0.69	184.73
18	4-15	2.00	56.9	9.00	47.14	9.00	47.14	31.00	25.40	-188.98	30.06	0.31	187.50
19	4-16	2.00	58.1	11.50	41.70	5.50	60.30	24.50	28.57	-190.05	39.84	0.44	190.21
20	4-17	2.00	58.4	11.00	42.64	7.50	51.64	26.50	27.47	-193.16	42.72	0.40	192.93
21	4-18	2.00	56.7	9.00	47.14	11.00	42.64	25.50	28.01	-189.49	30.58	0.35	195.68
22	5-1	2.00	56.3	13.50	38.49	6.50	55.47	27.00	27.22	-191.16	48.65	0.35	198.48
23	5-2	2.00	56.2	13.00	39.22	8.00	50.00	26.50	27.47	-189.47	44.15	0.43	201.30
24	5-3	2.00	59.5	14.00	37.80	8.00	50.00	29.00	26.26	-184.69	40.90	0.41	204.04
25	5-4	2.00	58.8	9.00	47.14	11.50	41.70	26.50	27.47	-192.98	34.70	0.46	206.78
26	5-5	2.00	56.6	8.50	48.51	5.00	63.25	19.50	32.03	-199.68	44.18	0.53	209.54
27	5-6	2.00	57.6	6.00	57.74	5.00	63.25	16.00	35.36	*****	0.00	0.62	212.27
COUNT RATE TOO LOW OR TOO COMPRESSED													
28	5-7	2.00	55.8	10.50	43.64	7.50	51.64	24.00	28.87	-194.66	43.30	0.35	214.99
29	5-8	2.00	58.0	8.00	50.00	5.00	63.25	19.00	32.44	-195.68	34.42	0.57	217.71
30	5-9	2.00	61.5	8.50	48.51	6.50	55.47	22.00	30.15	-197.98	40.53	0.54	220.54
31	5-10	2.00	58.0	13.00	39.22	3.00	81.65	24.00	28.87	-191.68	47.72	0.45	223.26
32	5-11	2.00	56.9	8.50	48.51	5.50	60.30	19.00	32.44	*****	0.00	0.59	226.01
COUNT RATE TOO LOW OR TOO COMPRESSED													
33	5-12	2.00	56.7	10.50	43.64	6.00	57.74	23.50	29.17	-185.99	31.89	0.45	228.73
34	5-13	2.00	58.3	9.50	45.88	6.50	55.47	25.50	28.01	-188.44	31.17	0.42	231.46
35	5-14	2.00	54.8	10.00	44.72	5.00	63.25	23.50	29.17	-190.50	35.13	0.43	234.18

46

Bench Top

36	5-15	2.00	58.2	10.00	44.72	5.50	60.30	22.00	30.15	-187.71	32.05	0.46	236.93
37	5-16	2.00	56.1	10.00	44.72	7.50	51.64	23.50	29.17	-193.10	42.13	0.38	239.67
38	5-17	2.00	57.3	8.00	50.00	5.50	60.30	19.50	32.03	-199.66	41.56	0.53	242.39
39	5-18	2.00	56.5	8.50	48.51	5.00	47.14	23.50	29.17	-191.29	30.76	0.40	245.15
40	6-1	2.00	56.6	11.50	41.70	6.50	55.47	27.50	26.97	-186.00	35.81	0.30	248.10
41	6-2	2.00	58.0	7.50	51.64	4.00	70.71	19.50	32.03	*****	0.00	0.44	250.81
42	6-3	2.00	58.3	10.50	43.64	7.50	51.64	25.50	28.01	-184.21	30.26	0.35	253.58
43	6-4	2.00	58.9	15.50	35.92	7.50	51.64	27.00	27.22	-184.95	45.04	0.33	256.30
44	6-5	2.00	58.6	10.00	44.72	3.50	75.59	23.50	29.17	-193.43	39.23	0.38	259.04
45	6-6	2.00	57.0	5.50	60.30	4.50	66.67	18.00	33.33	-200.60	30.16	0.50	261.76
46	6-7	2.00	56.7	8.00	50.00	8.00	50.00	22.00	30.15	-195.41	34.04	0.40	264.50
47	6-8	2.00	57.3	9.50	45.86	8.50	48.51	26.50	27.47	-190.43	33.35	0.32	267.25
48	6-9	2.00	58.9	11.50	41.70	5.50	60.30	27.50	26.97	-194.18	46.49	0.31	270.07
49	6-10	2.00	57.5	11.50	41.70	8.50	48.51	26.00	27.74	*****	0.00	0.33	272.79

COUNT RATE TOO LOW OR TOO COMPRESSED

50	6-11	2.00	56.8	11.50	41.70	5.00	63.25	22.50	29.81	-193.91	46.00	0.36	275.55
51	6-12	2.00	57.6	10.00	44.72	5.00	63.25	21.00	30.86	-194.18	40.42	0.41	278.28
52	6-13	2.00	57.8	8.50	48.51	10.00	44.72	21.00	30.86	-196.10	37.38	0.45	281.00
53	6-14	2.00	64.8	10.50	43.64	6.00	57.74	25.00	28.22	-184.32	32.25	0.40	283.76
54	6-15	2.00	58.4	10.00	44.72	8.50	48.51	26.00	27.74	-190.24	34.67	0.38	286.47
55	6-16	2.00	56.6	8.00	50.00	3.00	81.65	19.00	32.44	-197.94	38.14	0.48	289.19

**Report for Decommissioning Survey with Liquid Scintillation
Counts and Final Waste Removal**

RadSafe 25 LAB SURVEY REPORT BSB 115

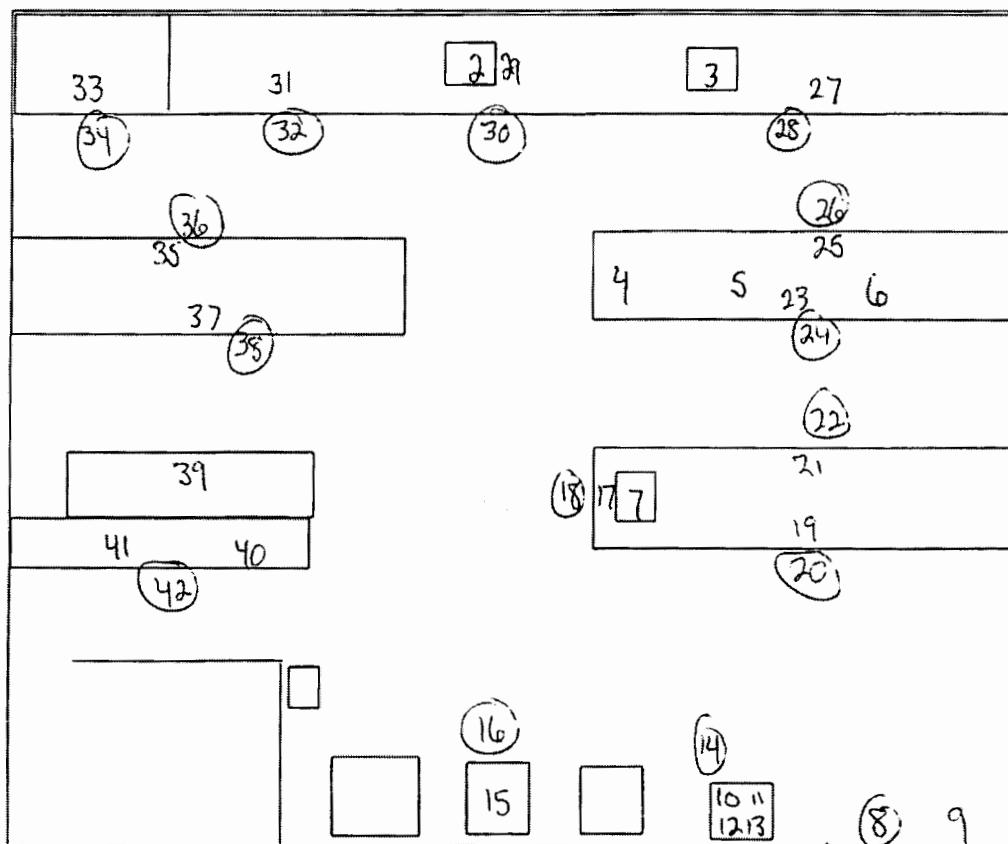
1. Hoods: NA
2. Lab's Monitoring Equipment: Ludlum 3, #121625 calibrated 1/06
current calibration certificate? Y/N: Y
3. Records: receipt ok use ok disposal ok day of use surveys ok 4. Training ok Authorization ok
5. Labeling: posting ok containers ok 7. Security of stored material ok
6. Special equipment present: N/A

Radiation Survey: Instrument: Ludlum 2241-2 SN: 237754 Cal: 1/11/2017
Probe: Ludlum 44-3 NaI SN: 206657 Background: 5539 CPM: Ludlum 44-9 Pancake SN: PR251596
Background: 41 CPM
Results: All results indistinguishable from background

Contamination Survey: Instrument: Beckman LSC 6500 #7071352 Cal: 2/21/2017
Results: All swipes less than 110 DPM/100 cm-sq

Notes: This is a decommissioning survey for general room release. All radioactive materials and RAM waste removed on 10/1/03.
Nothing found above background with any probe or instrument

Date: 7/20/17 By: William Wright



Number	Location
1	Background
2	P. Trap in Sink
3	P. Trap In Sink
4	P. Trap In Sink
5	P. Trap In Sink
6	P. Trap In Sink
7	P. Trap in Sink
8	Door/Floor
9	Light Switch
10	Freezer Out
11	Freezer In
12	Fridge Out
13	Fridge In
14	Floor
15	Incubators
16	Floor
17	Sink
18	Floor
19	Bench Top
20	Floor
21	Bench Top
22	Floor
23	Bench Top
24	Floor
25	Bench Top
26	Floor
27	Bench Top
28	Floor
29	Sink
30	Floor
31	Bench Top
32	Floor
33	Bio Cabinet
34	Floor
35	Bench Top
36	Floor
37	Bench Top
38	Floor
39	Freezer
40	Fridge
41	Fridge
42	Floor

19 JUL 2017 13:01

COMMENT :

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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 DPM	3H EFF-1	LUMEX %	ELAPSED TIME
				CPM	%ERROR	CPM	%ERROR	CPM	%ERROR				
B1	1-1	2.00	-2.2	18.00	33.33	4.00	70.71	31.00	25.40	40.12	44.86	0.12	2.68
B2	1-2	2.00	56.6	8.00	50.00	7.50	51.64	21.00	30.86	25.16	31.80	0.88	5.50
B3	1-3	2.00	57.7	13.00	39.22	7.50	51.64	26.50	27.47	34.25	37.95	0.59	8.35
B4	1-4	2.00	57.3	12.00	40.82	7.00	53.45	25.00	28.28	28.72	41.79	0.61	11.20
B5	1-5	2.00	57.4	8.50	48.51	6.00	57.74	22.50	29.81	*****	0.00	0.72	14.04
COUNT RATE TOO LOW OR TOO COMPRESSED													
B6	1-6	2.00	58.2	8.00	50.00	6.00	57.74	21.00	30.86	24.16	33.12	0.88	16.75
B7	1-7	2.00	57.3	11.00	42.64	11.50	41.70	31.00	25.40	32.05	34.32	1.05	19.59
B8	1-8	2.00	59.4	9.50	45.88	7.00	53.45	24.00	28.87	23.05	41.22	2.09	22.34
B9	1-9	2.00	58.4	10.00	44.72	6.50	55.47	25.50	28.01	34.98	28.59	0.43	25.09
B10	1-10	2.00	57.2	9.00	47.14	8.00	50.00	23.00	29.49	25.80	34.89	0.46	27.92
B11	1-11	2.00	60.5	8.00	50.00	12.00	40.82	26.50	27.47	27.61	28.98	0.38	30.76
B12	1-12	2.00	58.4	13.00	39.22	7.50	51.64	29.00	26.26	33.77	38.50	0.35	33.58
B13	1-13	2.00	61.5	11.50	41.70	8.00	50.00	27.50	26.97	29.36	39.17	0.56	36.34
B14	1-14	2.00	61.1	8.00	50.00	7.00	53.45	24.50	28.57	26.83	29.82	0.94	39.20
B15	1-15	2.00	59.9	7.50	51.64	8.00	50.00	23.00	29.49	28.14	26.65	1.68	41.94
B16	1-16	2.00	62.8	10.50	43.64	8.50	48.51	32.50	24.81	35.35	29.71	0.28	44.79
B17	1-17	2.00	59.7	10.50	43.64	7.00	53.45	25.50	28.01	26.61	39.46	0.31	47.49
B18	1-18	2.00	61.1	11.50	41.70	8.50	48.51	26.00	27.74	31.25	36.80	0.39	50.32
B19	2-1	2.00	58.9	7.50	51.64	8.00	50.00	18.50	32.88	27.97	26.81	0.47	53.16
B20	2-2	2.00	63.2	5.00	63.25	8.50	48.51	21.00	30.86	24.66	20.28	0.61	55.88
B21	2-3	2.00	58.6	8.00	50.00	5.50	60.30	22.50	29.81	23.72	33.73	0.72	58.74
B22	2-4	2.00	68.1	7.00	53.45	8.00	50.00	24.50	28.57	*****	0.00	1.42	61.48
COUNT RATE TOO LOW OR TOO COMPRESSED													
B23	2-5	2.00	57.3	12.50	40.00	6.00	57.74	22.50	29.81	*****	0.00	0.34	64.34
COUNT RATE TOO LOW OR TOO COMPRESSED													
B24	2-6	2.00	62.6	8.50	48.51	4.00	70.71	20.00	31.62	23.16	36.71	0.48	67.18
B25	2-7	2.00	57.9	8.00	50.00	6.50	55.47	22.50	29.81	22.25	35.95	0.34	70.04
B26	2-8	2.00	63.3	9.00	47.14	7.00	53.45	23.00	29.49	24.11	37.33	0.47	72.78
B27	2-9	2.00	61.3	5.50	60.30	7.00	53.45	18.50	32.88	18.55	29.65	0.51	75.51
B28	2-10	2.00	65.2	6.50	55.47	7.00	53.45	19.50	32.03	22.60	28.77	0.64	78.37
B29	2-11	2.00	60.4	9.00	47.14	8.50	48.51	24.00	28.87	*****	0.00	0.66	81.11
COUNT RATE TOO LOW OR TOO COMPRESSED													
B30	2-12	2.00	59.7	8.50	48.51	7.00	53.45	23.00	29.49	37.52	22.66	0.67	83.97
B31	2-13	2.00	57.2	10.50	43.64	5.50	60.30	23.00	29.49	28.81	36.44	0.66	86.68
B32	2-14	2.00	60.2	11.00	42.64	7.00	53.45	25.00	28.28	26.11	42.13	0.60	89.40
B33	2-15	2.00	59.2	10.00	44.72	7.50	51.64	22.50	29.81	24.66	40.56	0.71	92.16
B34	2-16	2.00	61.6	11.00	42.64	4.50	66.67	22.50	29.81	31.83	34.89	0.80	94.99
B35	2-17	2.00	56.8	10.50	43.64	6.50	55.47	24.00	28.87	27.72	37.88	0.56	97.84
B36	2-18	2.00	58.6	8.50	48.51	3.00	81.65	18.50	32.88	19.11	44.48	0.83	100.56
B37	3-1	2.00	57.3	6.50	55.47	11.00	42.64	24.00	28.87	*****	0.00	0.56	103.48
COUNT RATE TOO LOW OR TOO COMPRESSED													
B38	3-2	2.00	59.8	8.00	50.00	4.50	66.67	20.00	31.62	23.71	33.75	0.71	106.19
B39	3-3	2.00	58.0	8.50	48.51	7.50	51.64	21.00	30.86	24.72	34.39	0.73	109.07
B40	3-4	2.00	57.1	11.50	41.70	1.50	115.47	20.50	31.23	27.31	42.10	0.65	111.93
B41	3-5	2.00	56.4	8.50	48.51	6.00	57.74	20.50	31.23	*****	0.00	0.62	114.78
COUNT RATE TOO LOW OR TOO COMPRESSED													
B42	3-6	2.00	61.2	8.00	50.00	7.00	53.45	23.50	29.17	27.16	29.46	0.65	117.63
Blank Average DPM for 3H : 27.97 COEF. OF VAR: 17.899													

RadSafe 13

RADIOACTIVE WASTE PICK UP FOR:
Send completed forms to Radiation Safety, M3-305

Pick Up No. _____

1773

Date 10/1/03 Department/School Name: BiologyWaste generator's name: Honigberg Telephone: _____

Print name of person authorizing charges and pick up: _____

Signature of person authorizing charges and pick up: Sarah Pucirillo

Account Name to be charged: _____ Account Number: _____

Location of waste for pick up: Bldg: _____ Room: _____ Other: _____

If waste requires immediate attention, please explain: _____

Container	<u>5m solid</u>	<u>1951</u>			
Isotope	<u>P-32</u>	<u>P-32</u>			
"CI	<u>487</u>	<u>1063</u>			
Dose Rate I Meter					
Wipe test					
Disposal Date					
Disposal Mode					
Disposal by					
Mixed Waste (Y or N)					
Characteristic					

Hazardous Chemicals Present (include chemical names and % by weight (kg) of volume (L)):

Comments:

Picked up by M. M. M.Date 10/1/03

PRESS FIRMLY TO SEAL

PRESS FIRMLY TO SEAL



PAID
KANSAS CITY, MO
\$9.70
FEB 06, 18
AMOUNT
R2304H108870-08

1006
RECEIVED FEB 07 2018

PRIORITY® ★ MAIL ★

- DATE OF DELIVERY SPECIFIED*
- USPS TRACKING™ INCLUDED*
- INSURANCE INCLUDED*
- PICKUP AVAILABLE
* Domestic only

WHEN USED INTERNATIONALLY,
A CUSTOMS DECLARATION
LABEL MAY BE REQUIRED.

FROM: UMKC Radiation Safety
4747 Troost Ave. Room 003
Kansas City MO 64110-2499

TO: U.S. Nuclear Regulatory Commission
ATTN: Materials Licensing Branch Chief
Region III
2443 Warrenville Road
Suite 210
Lisle, IL 60532-4352

Expected Delivery Day: 02/07/2018

USPS SIGNATURE TRACKING NUMBER



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