

L-4



IBA Molecular 21000 Atlantic Boulevard, Suite 730 | Dulles, VA 20166 | Toll Free: 1 877 334 3673
Tel.: + 1 703 787 7900 | Fax: + 1 571 434 0330 | www.ibamolecular.com

November 6, 2015

Materials Licensing Branch
U.S. Nuclear Regulatory Commission, Region I
King of Prussia, PA 19406

Re: Amendment Request for Radioactive Materials License Number 45-25221-01MD

Docket No. 03032974

Dear Ms. Lanzisera,

This letter is a response to your request for more information regarding the decommissioning of the facility located at 3601 Morgantown Industrial Drive, Morgantown, WV 26501.

Please see the attached page of responses.

We are prepared to discuss in more detail or provide additional information to support your review. If additional information is required, please contact me at the information listed below. Thank you for your assistance in this process.

Sincerely,

A handwritten signature in black ink, appearing to read 'Todd Hockemeyer', with a long horizontal line extending to the right.

Todd Hockemeyer
VP - Quality & Regulatory Affairs
Radiation Administrator
IBA Molecular North America, Inc.
317-417-2860
thockemeyer@zevacor.com

REC'D 11 09 15 AM 10/41

500167
NMS9/RGN1 MATERIALS-002



IBA Molecular 21000 Atlantic Boulevard, Suite 730 | Dulles, VA 20166 | Toll Free: 1 877 334 3673
Tel.: + 1 703 787 7900 | Fax: + 1 571 434 0330 | www.ibamolecular.com

1. Confirmation of receipt of the sources listed in your inventory dated May 21, 2014 at the IBA Molecular facility located at West Virginia University.

Please see the attached document representing the first inventory at the new facility, therefore confirming the receipt of the sources.

2. Were the charcoal filters, filter banks, and filter housing located on the roof for the effluent system measured prior to disposal/transfer? If so, please provide the results of the measurements.

The charcoal filters had been removed and disposed of prior to the survey. The filter housing, the ductwork, and the exhaust stack were all dismantled and included in the survey (Biased sample ID numbers SU5-19, SU5-20, SU5-21, SU5-22, SU5-23, & SU5-24).

3. Please provide the certificate of calibration for the Ludlum Model 19 used for surveys.

Please see the attached Ludlum Model 19 Certificate of Calibration.

4. Please indicate whether equipment located in the radiopharmacy (hoods, glove box, waste storage drums, dose calibrators, etc.) was surveyed to ensure free of contamination and provide the results of the surveys.

All equipment remaining in the facility at the time of the survey was included in the survey, although most of the equipment was moved to the new facility in the WVU hospital. The hoods/Hot Cells were included in the survey. The hoods/Hot Cells were scanned and two biased sample points were also taken (sample ID numbers SU4-26 and SU4-27).

5. It is unclear whether the insides of the ducts and the drains were measured for contamination. Please confirm and provide survey results.

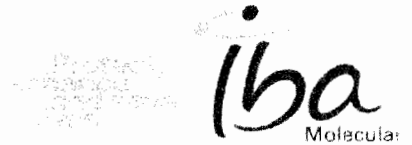
Sinks and drains were included in the surveys (biased sample ID numbers SU3-27, SU3-28, SU4-24, SU4-25). Exhaust ducts were removed and included in the Survey Unit 5 roof survey.

6. Please provide the units for dose rate measurements documented in Survey Units 1-6.

All dose rate measurements are in microR/hr.

7. The survey results for Survey Unit 1 indicates that no elevated gamma was noted. Please confirm that no elevated beta was also noted.

No beta count rates above the survey action levels were noted during the scan survey.



IBA Molecular 21000 Atlantic Boulevard, Suite 730 | Dulles, VA 20166 | Toll Free: 1 877 334 3673
Tel.: + 1 703 787 7900 | Fax: + 1 571 434 0330 | www.ibamolecular.com

- 8. The historical assessment indicates that the facility was previously operated as Eastern Isotopes, Inc. Please confirm that the list of radionuclides includes those previously used by Eastern Isotopes, Inc. If not, please provide a revised list.**

The list of radionuclides includes all radionuclides listed on licenses from both IBA and Eastern Isotopes.

- 9. Please submit records of spills or other unusual occurrences important to decommissioning to the NRC as described in 10 CFR 30.35(g)(1). Alternatively, you may confirm that spills were decontaminated as they occurred with no remaining contamination after cleanup.**

Spills were decontaminated as they occurred with no remaining contamination after cleanup.



BA Molecular @ WVU HSC South

1 Medical Center Drive, Morgantown, West Virginia

LIC. # 311001

August 20, 2014

Test Date & Time : 08-20-2014 11:50

Technologist : MICHAEL LEVY

#	Chemical Name	Manufacturer	Model #	Serial #	Location	Cal. Date	Cal. Activity	Current Act.	Present Y/N?
1	Ge - 68	RadQual	BM06	BM06068S13308102	SAFE	11-07-2013	1.0230 mCi	0.4932 mCi	Y
2	Co - 60			1196	SAFE	12-22-2010	0.1576 uCi	0.0973 uCi	Y
3	Cs - 137	RadQual		BM06137E12243116	DHC	09-04-2012	0.2070 mCi	0.1979 mCi	Y
4	Ge - 68	RadQual		BM0806812192104	SAFE	11-09-2012	122.8000 nCi	23.3807 nCi	Y
5	Cs - 137	RadQual		BM0813712276107	SAFE	10-04-2012	132.6000 nCi	127.0122 nCi	Y
6	Ge - 68	RadQual		BM06068S11299102	BUNKER	10-31-2011	0.5550 mCi	0.0405 mCi	Y
7	Ge - 68	RadQual		BM0806810281102	BUNKER	10-31-2011	194.2000 nCi	14.1594 nCi	Y
8	Ba - 133	ISOTOPE PRODUCTS		74333	BUNKER	11-01-2000	269.3000 uCi	108.2593 uCi	Y
9	Ba - 133	ISOTOPE PRODUCTS		7259716	BUNKER	03-01-2001	0.1110 uCi	0.0456 uCi	Y
10	Cs - 137	ISOTOPE PRODUCTS		6861222	SAFE	12-12-2002	254.0000 uCi	193.8654 uCi	Y
11	Cs - 137	ISOTOPE PRODUCTS		75781	BUNKER	03-15-2001	0.1017 uCi	0.0747 uCi	Y
12	Ge - 68	RadQual	BM06S-685	BM06068S08344104	BUNKER	12-11-2008	0.5600 mCi	0.0027 mCi	Y
13	Ge - 68	RadQual	BMROD	BM0806808273109	BUNKER	10-22-2008	550.2000 nCi	2.3772 nCi	Y

The Above Report indicates all of the Sealed Sources have been accounted for.

RSO Signature : MLL 20-Aug-14 RSO in Training

Technologist Signature : Jim Kostka CORP RS Compliance Kostka

all on site

#12 #13 old Ge's

found & put back into inventory



200 North Cedar Road - New Lenox, Illinois 60451-1751 - (800) 383-0468 or (815) 485-6161 - FAX (815) 485-4433 - Email sahci@sahci.com - Home Page www.sahci.com

Certificate of Calibration

Facility: **IBA MOLECULAR**
City/State: **ROMEovILLE IL**

Calibration Date: July 10th, 2015

Manufacturer: **LUDLUM** Model No.: **19** Serial No.: **250405**

Instrument Identification: G-M ION CHAMBER POCKET DOSIMETER HR/hr
 Probe Type: PANCAKE END WINDOW SIDE WINDOW NaI
 Window: Open Closed Fixed

Calibration Sources

Cs-137 #1 ($\Gamma=0.33$) 0.1547 mCi
 Cs-137 #2 ($\Gamma=0.33$) 51.72 mCi
 Co-57 ($\Gamma=0.9$) 0.756 mCi
 Tc-99 50216 DPM

Co-57 Efficiency Relative to Cs-137: 1 mR/hr = N/A cm
 Observed mR/hr (Co-57) _____ x 100 = _____ %
 Actual mR/hr (Co-57) _____
 Tc-99 Efficiency (4π)
 Observed CPM (Tc-99) _____ x 100 = _____ %
 Actual DPM (Tc-99) _____

All Sources as of Date: 7/5/15

Scale Ranges	Distances Source #1	Distances Source #2	Actual uR/hr	Observed uR/hr	Within +/- 10%	Correction Factor
25	/	845	5	5	✓	1
		3380	20	20		1
50	/	1690	10	10	✓	1
		6520	40	40		1
250	/	8450	50	50	✓	1
		33800	200	200		1
500	/	16900	100	100	✓	1
		65200	400	400		1
5000	/	169000	1000	1000	✓	1
		652000	4000	4000		1

Angle of the flux field to detector (internal or external) is 90 degrees (perpendicular) and the distance is from center of source to center of detector, unless stated otherwise. Sodium iodide front end detectors are calibrated parallel to the flux field. All Sources used for calibrations are traceable to the National Institute Of Standards and Technology.

Source Set A Scales calibrated electronically with Pulser #142038 or #159107

Battery Check: 42 (mR/hr) or _____ Operational Check: 300 using #3998
 Comments: Deopen

Next Calibration Date: 7/5/16

Calibrated by: [Signature]

Stan A. Huber Consultants, Inc.
200 North Cedar Road -- New Lenox, Illinois 60451
Phone (815) 485-6161 -- Fax (815) 485-4433

The information is for the identification of sources used in instrument calibrations performed by Stan A. Huber Consultants, Inc.

The following source set (A) is used by SAH

Manufacturer	Radionuclide	Model No.	Serial No.	Activity	Assay Date
NAS	Cs-137	MED3550	35455	0.2051 mCi	04-1-03
JL Shepherd	Cs-137	28-5	10223	78	08-23-97
Eckert & Ziegler	Co-57	RV-057-5M	1618-43-8	5.203 mCi	07-1-13
Isotope Products	Ba-133	RV-133-250U	970-72-15	253.5 μ Ci	06-01-03

The following source set (B) is used by _____

Manufacturer	Radionuclide	Model No.	Serial No.	Activity	Assay Date
North American Scientific	Cs-137	MED 3550	32697	0.209 mCi	02-01-03
Tech Ops	Cs-137	773	S823	155.4 mCi	03-11-92
Eckert & Ziegler	Co-57	RV-057-5M	1618-43-13	5.214 mCi	07-1-13
Isotope Products	Ba-133	RV-133-250U	970-72-17	259.9 μ Ci	06-01-03

The following source set (C) is used by _____

Manufacturer	Radionuclide	Model No.	Serial No.	Activity	Assay Date
Isotope Products	Cs-137	MED 3550	1047-24-3	0.199 mCi	04-01-04
Tech Ops	Cs-137	77302	S-575	147.4 mCi	09-17-86
Eckert & Ziegler	Co-57	RV-057-5M	1618-43-17	5.165 mCi	07-1-13
Isotope Products	Ba-133	RV-133-250U	970-72-19	254.8 μ Ci	06-01-03

The following source set (D) is used by _____

Manufacturer	Radionuclide	Model No.	Serial No.	Activity	Assay Date
NEN	Cs-137	NES-356	3560379A-17	0.203 mCi	03-28-79
Tech Ops	Cs-137	773	S389	93.3 mCi	08-25-97
Isotope Products	Co-57	RV-057-5M	1445-38-46	5.863 mCi	11-1-10

Manufacturer	Radionuclide	Model No.	Serial No.	Activity	Assay Date
Eckert & Ziegler	Tc-99	EAB-099-32U	K4-528	22.62 nCi	6/1/13

Pulser

Manufacturer	Model No.	Serial No.
Ludlum	500	142038
Ludlum	500-2	159107

updated 2/5/2014