



HBM Virginia LLC
4660 S Eastern Avenue #207
Las Vegas, NV 891196

HBM Virginia LLC, 4660 S Eastern Avenue #207, Las Vegas, NV891196

Chief, Licensing Branch
Mail Stop T-8E24
U.S. Nuclear Regulatory Commission
11545 Rockville Pike
Rockville, Maryland 20852

November 03, 2014

License No 45-23954-02E

To Whom It May Concern:

HBM Virginia LLC has relocated to Nevada with a place of business at the above address. We have asked the Virginia Health Department to terminate our possession license in Virginia, and we have applied for a new possession licence in Nevada.

We have stopped importing and distributing any product and do not possess product that has not been duly distributed under our possession and distribution licenses terms. We will not import or distribute product until we have obtained a new possession license in Nevada and until the NRC has granted an amendment (still to be applied for from our side) to our distribution license based on our future possession license.

The above office address is not suitable for possession or use of radioactive material and we have therefore leased a laboratory address which is different from the business address above. Please find attached a copy of the application for our possession license in Nevada.

For our new possession license we have hired a new RSO, Prof. Dr. Ralf Sudowe. Please find his delegation authority and resume attached.

Once we receive our new possession license we will apply for an amendment of our NRC exempt distribution license to replace the use and office address, and also to delegate Dr Sudowe as our RSO for the exempt distribution license.

HBM Virginia LLC is
licensed by the
US Nuclear Regulatory Commission
for import and exempt distribution
License No 45-23954-02E



Member of BCS Zimmermann Group



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4660 S Eastern Avenue #207
Las Vegas, NV 891196

Our licensing activities will be coordinated by Dr. Joern Meissner. Joern can be reached at meissner@meissner-consulting.com. He is more than happy to call you back should you need more information.

Best regards,

Martin Zimmermann
Managing Director

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Nevada Radiation Control Program



License Application for NON-Medical Use of Radioactive Materials

APPLICANT INFORMATION			
Martin Zimmermann		HBM Virginia LLC	
NAME OF APPLICANT		NAME OF COMPANY OR BUSINESS	
4660 S. Eastern Avenue, Suite 207		Las Vegas	NV 89119
BUSINESS STREET ADDRESS		CITY	STATE ZIP CODE
Renewal? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Other State/NRC Virginia: 061-460-1, NRC:45-23954-02E		
PREVIOUS NV LICENSE NUMBER		RAM Licenses?	LIST ALL RAM LICENSES
+1 540-222-0958		hbm@hbmnevada.com	
TELEPHONE NUMBER	CELL NUMBER	FAX NUMBER	E-MAIL ADDRESS
Bigelo Health Sciences Building, Room BHS 113,4505 S. Maryland Parkway.		Las Vegas	NV 89154-3037
RAM USE STREET ADDRESS		CITY	STATE ZIP CODE

RADIATION SAFETY OFFICER* (RSO) & AUTHORIZED USERS			
Ralf Sudowe	+1 (702) 895-5964	+1 (702) 487-2821	ralf.sudowe@unlv.edu
NAME OF RSO	TELEPHONE NUMBER	CELL NUMBER	E-MAIL ADDRESS
Martin Zimmermann	General Manager		
NAME OF INDIVIDUAL USER	TITLE	NAME OF INDIVIDUAL USER	TITLE
NAME OF INDIVIDUAL USER	TITLE	NAME OF INDIVIDUAL USER	TITLE

*Submit the RSO training certificate and Delegation of Authority form for the RSO.

PERSONNEL MONITORING-DOSIMETRY (NVLAP CERTIFIED)			
TYPE	CALIBRATION METHOD*	PROCESSING METHOD*	BIOASSAY PROCEDURE*
FILM, TLD, ETC.	IF APPLICABLE*	IF APPLICABLE*	IF APPLICABLE*
Supplier			
Frequency of exchange:	Commit to maintain control badges <input type="checkbox"/>		

UNSEALED SOURCES			
RADIOACTIVE MATERIAL	CHEMICAL FORM	MAX ACTIVITY	USE OF RAM
A=1-83	irradiated gemstones (byproduct)	300µCi	incidental to distribution according to NRC exempt distribution license
A=84-96	irradiated gemstones (byproduct)	1µCi	incidental to distribution according to NRC exempt distribution license
SAMPLE (I-125)	LIQUID	2 mCi	IN-VITRO TISSUE ANALYSIS

SEALED SOURCES						
MFG	RADIOACTIVE MATERIAL	MAX ACTIVITY	MODEL NO.	SERIAL NO.	NO. OF SOURCE	PURPOSE FOR USE
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
ATOMLAB	(SAMPLE) CS-137	100 MCI	M****	32-5678	6	CALIBRATION TEST

RADIATION DETECTION INSTRUMENTS					
MANUFACTURER	MODEL	RAD	RANGE	CALIBRATION COMPANY	CALIBRATION FREQUENCY
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
MAKE AND MODEL NUMBER		α, β, γ		THICKNESS	MONITOR, SURVEY, MEASURE

ATTACHMENT CHECKLIST	
<input type="checkbox"/>	Check payable to Radiation Control Program in the amount of <u>\$ 1000</u> -see NAC 459.310
<input type="checkbox"/>	Use the checklist of commitments and items to submit for the appropriate license type: http://www.health.nv.gov/HCQC_Radiological_Forms.htm

LICENSING GUIDANCE


- For licensing guidance, please refer to the U.S. Nuclear Regulatory Commission NUREG-1556 series "Consolidated Guidance About Materials Licenses". There is a specific volume that will pertain to each type of licensing.

CERTIFICATION

As the applicant, I am a company officer executing this certification, and certify that this application is prepared in conformity with Nevada Administrative Code (NAC) 459 and that all information contained herein, including any supplements attached hereto, are true and correct to the best of my knowledge.

Martin Zimmermann
PRINTED NAME OF APPLICANT

General Manager
TITLE OF CERTIFYING OFFICIAL


SIGNATURE

07-Oct-2014
DATE

TRAINING

Martin Zimmermann

NAME OF INDIVIDUAL

TYPE OF TRAINING	WHERE TRAINED	DURATION OF TRAINING	ON THE JOB	FORMAL COURSE
Principles and practices of radiation protection	Herotron Technologies, Germ 5d		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Radioactivity measurement standardization, monitoring techniques and instruments	Herotron Technologies, Germ part of the abov		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Mathematics and calculations basic to the use and measurement of radioactivity			<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Biological effects of ionizing radiation	Herotron Technolgies, Germa part of the abov		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N

EXPERIENCE

RADIONUCLIDE	MAX AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
<u>byproduct</u>	<u>~ μCi</u>	<u>on the job</u>	<u>since 2007</u>	<u>irradiated gemstones for distribution</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

DUPLICATE THIS PAGE FOR MULTIPLE USERS.



Division of Public and Behavioral Health
 Radiation Control Program
 Delegation of Authority
 Radiation Safety Officer



HBM Virginia LLC


Licensee Name: HBM Virginia LLC License Number: _____
 Effective: 08 Oct 2014, Ralf Sudowe assumes the responsibilities
DATE NAME OF RADIATION SAFETY OFFICER

of Radiation Safety Officer (RSO). These responsibilities include: ¹

- a) Managing and reviewing the Radiation Protection Program annually
- b) Identifying, recommending, initiating, verifying & completing corrective actions for radiation safety problems
- c) Ensuring radioactive materials used are authorized on the license & used for the purpose indicated
- d) Ensuring that use of radioactive materials is only by individuals authorized by the license
- e) Ensuring compliance with regulatory requirements & license conditions
- f) Ensuring that radioactive materials are properly secured at all times when they are not in use
- g) Terminating operations if necessary for radiation safety
- h) Notifying management of licensing actions and regulatory noncompliance
- i) Contacting the Radiation Control Program for any changes to the license prior to implementation
- j) Making binding commitments and signing official documents under the license

Estimated time required for radiation safety activities: < 1 hrs/wk.

The license and the decisions made upon the license by the RSO, ultimately remain the responsibility of management.

	Martin Zimmermann, General Manager	08 Oct 2014
<small>SIGNATURE OF MANAGEMENT REPRESENTATIVE</small>	<small>PRINTED NAME & TITLE²</small>	<small>DATE</small>
RSO ACCEPTANCE OF APPOINTMENT & AUTHORITY TO MAKE BINDING COMMITMENTS³		
	Ralf Sudowe	08 Oct 2014
<small>SIGNATURE OF RSO</small>	<small>PRINTED NAME</small>	<small>DATE</small>

RSO CONTACT INFORMATION: (REQUIRED)

ralf.sudowe@univ.edu	+1 (702) 895-5964
<small>RSO'S E-MAIL</small>	<small>RSO'S PHONE NUMBER</small>
+1 (702) 487-2821	+1 (702) 895-4819
<small>RSO'S CELL PHONE NUMBER</small>	<small>RSO'S FAX NUMBER</small>

¹ See NUREG-1556 Vol. 1-21 (use the appropriate volume for licensed use)
² Submit an organizational chart
³ Appointment and delegated authority are invalid unless signed with title & dated by both management and RSO.

Dr. Ralf Sudowe

Department of Health Physics & Diagnostic Sciences
University of Nevada
4505 S. Maryland Parkway
Box 453037
Las Vegas, NV 89154-3037

Phone: +1 (702) 895-5964
Fax: +1 (702) 895-4819
Email: ralf.sudowe@unlv.edu

Research Highlights

- Member of the scientific team that discovered element 117.
- Participated in the first chemical study of element 108, hassium and the confirmation of the discovery of element 110.
- Took part in the discovery of the two isotopes seaborgium-264 and bohrium-260.
- U.S. project leader in the first successful study of transactinide elements using the automated system SISAK coupled to the Berkeley Gas-filled Separator by an international research collaboration.
- Designed and tested techniques to apply the Berkeley Gas-filled Separator as a pre-separator for chemistry experiments.
- Developed a procedure to separate radioactive gaseous byproducts of a fusion reactor using Nuclear Track Microfilters.
- Co-discovered the plutonium isotope 231.
- Developed procedures for fast and reliable analysis of plutonium, americium and curium in environmental samples.

Professional and Research Experience

University of Nevada Las Vegas

Associate Professor for Health Physics and Radiochemistry, 2012 – present

Assistant Professor for Health Physics and Radiochemistry, 2006 – 2012

- Developed novel radioanalytical methods for nuclear forensics and safeguards, emergency response and environmental monitoring.
- Studied the chemical behavior and migration of radionuclides in the environment.
- Conducted experiments to measure neutron capture cross sections of unstable nuclei in collaboration with groups at Los Alamos National Laboratory and Lawrence Livermore National Laboratory.
- Developed and taught classes in radiation detection, radiation biology and environmental health physics as well as laboratory classes in detector instrumentation and radiochemistry.

Lawrence Berkeley National Laboratory

Staff Scientist in the Nuclear Science Division, 2005 - 2006

Staff Scientist in the Chemical Sciences Division, 2001 - 2005

Visiting Postdoctoral Fellow in the Nuclear Science Division, 1999 – 2001

Guest scientist as a fellow of the German Academic Exchange Service, January – April 1998

- Performed experiments and designed suitable experimental systems to study the solution chemistry of transactinide elements manually and using the automated chemistry system SISAK.
- Participated in multinational experiments to study the chemical properties of the elements 104, 105, 107 and 108 and 112
- Developed chemical systems for the separation of lanthanide and actinide elements and prepared targets for irradiation experiments. The work included handling of highly radioactive material in glove boxes.
- Team member in experiments to study the nuclear properties of heavy elements, especially of elements 110, 111 and 112.
- Managed the laboratories of the Heavy Element Nuclear and Radiochemistry Group on a day to day basis.
- Supervised and trained undergraduate and graduate students as well as postdoctoral fellows.

Philipps-Universität Marburg, Institute for Physical, Nuclear and Macromolecular Chemistry, Germany
Graduate Research and Teaching Assistant, 1995 – 1999

- Applied Nuclear Track Micro Filter to the task of separating gas mixtures.
- Developed and optimized methods for the separation and determination of actinide elements, especially plutonium and americium. This work included the participation in “Round Robin” tests of the IAEA and BfS, as well as the routine analysis of various types of samples for a federal agency.
- Participated in irradiation experiments to study the transmutation of long-lived actinide elements.

Münchener Apparatebau GmbH, Munich, Germany

Freelance Worker, January - February 1997 and November 1998

- Responsible for testing and servicing radiation monitoring devices under federal supervision at the Nuclear Power Plant Biblis, Germany

Education

Dr. rer. nat. Nuclear Chemistry, Philipps-Universität Marburg, Germany, July 1999.
Thesis: Studies on gas separation by molecular diffusion through Nuclear Track Micro Filters.
Magna cum laude (Thesis advisor: Prof. Dr. R. Brandt)

Dipl.-Chem. Chemistry, Philipps-Universität Marburg, Germany, August 1995
Thesis: Determination of transuranium elements in environmental samples and natural uranium
Cum laude (Thesis advisor: Prof. Dr. R. Brandt)

Awards and Honors

- Distinguished Scholar Award, School of Allied Health Sciences, University of Nevada Las Vegas, 2008 & 2013
- Fellowship of the German Academic Exchange Service (DAAD), 1998

Professional Activities

- Symposium Organizer, 248th ACS National Meeting, San Francisco, CA, USA, August 10-14, 2014
- Symposium Organizer, 9th International Conference on Methods and Applications of Radioanalytical Chemistry, Kailua-Kona, HI, USA, March 24-30, 2012
- Symposium Organizer, 241st ACS National Meeting, Anaheim, CA, USA, March 27-31, 2011
- Symposium Organizer, 8th International Conference on Methods and Applications of Radioanalytical Chemistry, Kailua-Kona, HI, USA, April 5-10, 2009
- Symposium Organizer, 42nd ACS Western Regional Meeting, Las Vegas, NV, USA, September 23-27, 2008
- Symposium Organizer, 233rd ACS National Meeting, Chicago, IL, USA, March 25-29, 2007
- Member, Advisory Committee, European Science Foundation Exploratory Workshop on the Chemistry of the Transactinide Elements, Oslo, Norway, 2005
- Member, Local Organizing Committee, 2nd International Conference on the Chemistry and Physics of the Transactinide Elements, Napa, California, 2003

Memberships in Professional Societies

- American Chemical Society,
 - Division of Nuclear Chemistry and Technology
 - Industrial & Engineering Chemistry Division, Separation Science & Technology Subdivision.
- American Nuclear Society
- Health Physics Society.

Skills and Areas of Knowledge

- Radioanalytical Chemistry
- Health physics and dosimetry
- Radiation Detection (α -, β - and γ -ray spectroscopy)
- Chemistry of the lanthanide, actinide and transactinide elements and fission products (inorganic, trace and environmental chemistry).
- Nuclear properties of the actinide and transactinide elements.
- Manual and automated separation and chromatography techniques (liquid-liquid extraction, solid phase extraction, ion exchange and extraction chromatography).
- Preparation of stable and radioactive targets for irradiation experiments.
- Use of recoil separators for nuclear physics and chemistry experiments.
- Analytical chemistry (AAS, FES, MS, NMR, IR, GC, HPLC).
- Handling and transporting of radioactive material.
- Nuclear electronics, data acquisition systems and analysis software.
- Student training in nuclear chemistry, health physics and separation techniques.

Collaborators & Other Affiliations

Bredeweg, Todd (LANL); Bond, Evelyn (LANL); Cereface, Gary (UNLV); Czerwinski, Ken (UNLV); Düllmann, Christoph (Universität Mainz, Germany); Eichler, Robert (PSI, Switzerland); Folden III, Charles (Texas A&M University); Gharibyan, Narek (LLNL); Gates, Jacklyn (LBNL); Gostic, Julie (AFTAC); Gregorich, Kenneth (LBNL), Hatchett, Dave (UNLV); Henderson, Roger (LLNL); Hutcheon, Ian (LLNL); Inn, Kenneth (National Institute of Standards and Technology); Madsen, Steen (UNLV); Mertz, Carol (ANL), Moody, Ken (LLNL); Nilson, Mikael (UC Irvine), Nitsche, Heino (UC Berkeley); Omtvedt, Jon Petter (University of Oslo, Norway); Paviet, Patricia (DOE); Shaughnessy, Dawn (LLNL)

Graduate Advisees

Bene, Balazs (UNLV); Bennett, Megan (ANL); Bensen, Mathew (UNLV); Boron-Brenner, Lucas (UNLV), Boyd, Wesley (Hanford Site); Daily, Ashlee (Remote Sensing Laboratory); Daum, Jaimie (UNLV); Despotopoulos, John (UNLV); Faye, Sherry (UNLV); Gallardo, Athena (UNLV); Gharibyan, Narek (LLNL); Harvey, Zachary (LBNL); Kelly, Lindsey (EPA); Klug, Christopher (Georgia Regents University); McLain, Derek (UNLV); Mena, RaJah (Remote Sensing Laboratory); Nell, Julia (UNLV); Richards, Jason (UNLV); Roman, Audrey (LANL); Rolfes, Jeff (UNLV), Springs, Rebecca (UNLV)



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ROCKVILLE MD 20852

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Company HBTJ Virginia LLC

Address 2442 Legacy Island Circle
Dept./Floor/Suite/Room

City Henderson State NV ZIP 89079

2 Your Internal Billing Reference

3 To
Recipient's Name U.S. N.R.C. Phone

Company Chief Licensing Branch

Address Mail Stop T8E24
We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

Address 11545 Rockville Pike
Use this line for the HOLD location address or for continuation of your shipping address.

City Rockville State MD ZIP 20852

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REQUIRED. NOT available for
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REQUIRED. Available ONLY for
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SATURDAY Delivery
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Someone at recipient's address may sign for delivery. *Fee applies.*

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If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?

No Yes Yes Dry Ice Cargo Aircraft Only

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Dry Ice, 5, UN 1845 _____ x _____ kg

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