



TEXAS
Health and Human
Services

**Texas Department of State
Health Services**

RADIOACTIVE MATERIAL LICENSE

Pursuant to the Texas Radiation Control Act and Texas Department of State Health Services (Agency) regulations on radiation, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess and transfer radioactive material listed below; and to use such radioactive material for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations and orders of the Agency now or hereafter in effect and to any conditions specified below.

1. Name 2. Address	LICENSEE TEXAS A&M UNIVERSITY ENVIRONMENTAL HEALTH & SAFETY ATTN: LATHA VASUDEVAN PHD CHP 4472 TAMU COLLEGE STATION TX 77843-4472	RECEIVED JUN 23 2021	
		3. License Number	L05683
		4. Expiration Date	August 31, 2024
		Amendment Number	44

This license is amended in accordance with correspondence dated May 18, 2021.

5. Radioisotope	6. Form of Material	7. Maximum Activity	8. Authorized Use
A. Americium-241	A. Sealed source (DuPont Model NER-478C)	A. 1 source not to exceed 100 millicuries	A. Research and education.
B. Americium-241/Beryllium	B. Sealed source (CPN Model CPN-131)	B. 14 sources not to exceed 50 millicuries each	B. Measurement of physical properties using CPN International Division of InstroTek, Inc. (CPN) Model 503 moisture gauge.
C. Americium-241/Beryllium	C. Sealed source (EZ Models 3021, 3027, Am1.NO2QSA Model AMN.V997;)	C. 2 sources not to exceed 44 millicuries each	C. Measurement of physical properties using Troxler Electronic Laboratories (TEL) Model 3400 Series moisture/density gauge.
D. Any radioactive material with atomic number 1-83 with a half-life less than 120 days	D. Activated solids	D. 10 millicuries	D. Possession of activated materials incidental to accelerator operation authorized under Radioactive Material License L06561.

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5. Radioisotope	6. Form of Material	7. Maximum Activity	8. Authorized Use
E. Any radioactive material with atomic number 1-83 with a half-life greater than 120 days, except as listed below	E. Activated solids	E. 10 millicuries, no single radionuclide to exceed 100 times the "Limit" column specified in Table §289.252(jj)(2)	E. Possession of activated materials incidental to the accelerator operation authorized under Radioactive Material License L06561.
F. Any radioactive material with atomic number 1-83 with a half-life greater than 120 days	F. Activated metal samples	F. 50 millicuries	F. Research and education.
G. Any radioactive material with atomic numbers 1 through 83 with a half-life less than 120 days	G. Activated metal samples	G. 50 millicuries	G. Research and education.
H. Californium-252	H. Sealed source (EZ Model N-252)	H. 3 sources not to exceed 10 microcuries each	H. Research and education.
I. Carbon-14	I. Solid or liquid	I. 15 millicuries	I. Research and education.
J. Cesium-137	J. Sealed source (EZ Model CDC.P4)	J. 2 sources not to exceed 500 microcuries each	J. Research and education.

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5. Radioisotope	6. Form of Material	7. Maximum Activity	8. Authorized Use
K. Cesium-137	K. Sealed source (QSA Model CDCW556; EZ Model HEG-137)	K. 2 sources not to exceed 9 millicuries each	K. Measurement of physical properties using TEL Model 3400 Series moisture/density gauge.
L. Chromium-51	L. Solid	L. 2 millicuries	L. Research and education.
M. Cobalt-56	M. Solid	M. 1 millicurie	M. Research and education.
N. Cobalt-57	N. Solid	N. 1 millicurie	N. Research and education.
O. Cobalt-58	O. Solid	O. 1 millicurie	O. Research and education.
P. Cobalt-60	P. Solid	P. 4 millicuries	P. Research and education.
Q. Depleted Uranium	Q. Solid or liquid	Q. 350 microcuries	Q. Research and education.
R. Europium-152	R. Solid	R. 10 microcuries	R. Research and education.
S. Hydrogen-3	S. Solid or liquid	S. 30 millicuries	S. Research and education.
T. Iodine-125	T. Liquid	T. 30 millicuries	T. Research and education.
U. Iodine-131	U. Liquid	U. 1 millicurie	U. Research and education.
V. Iron-55	V. Solid	V. 4 millicuries	V. Research and education.
W. Iron-59	W. Solid	W. 1 millicurie	W. Research and education.
X. Manganese-54	X. Solid	X. 4 millicuries	X. Research and education.
Y. Nickel-63	Y. Solid	Y. 1 millicurie	Y. Research and education.
Z. Phosphorous-32	Z. Solid or liquid	Z. 40 millicuries	Z. Research and education.
AA. Phosphorous-33	AA. Solid or liquid	AA. 15 millicuries	AA. Research and education.
BB. Strontium-90	BB. Solid	BB. 10 microcuries	BB. Research and education.
CC. Sulfur-35	CC. Solid or liquid	CC. 30 millicuries	CC. Research and education.
DD. Tantalum-182	DD. Solid	DD. 1 millicurie	DD. Research and education.

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5. Radioisotope	6. Form of Material	7. Maximum Activity	8. Authorized Use
EE. Thorium-232	EE. Solid	EE. 1 millicurie	EE. Research and education.
FF. Tungsten-181	FF. Solid	FF. 1 millicurie	FF. Research and education.
GG. Tungsten-185	GG. Solid	GG. 1 millicurie	GG. Research and education.
HH. Tungsten-188	HH. Solid	HH. 1 millicurie	HH. Research and education.
II. Uranium-235	II. Solid	II. 4 microcuries (1.85 grams)	II. Research and education.
JJ. Uranium-238	JJ. Solid	JJ. 750 microcuries	JJ. Research and education.
KK. Zinc-65	KK. Solid	KK. 1 millicurie	KK. Research and education.

9. A. Radioactive material shall only be stored and used at:

<u>Site Number</u>	<u>Location</u>
000	College Station – 1111 Research Parkway Room 130 (Main Site)
001	Prairie View – 100 University Drive
004	Beeville – 3507 Highway 59
005	Lubbock – 1102 FM 1294
007	Plainview – 823 W US HWY 70
008	Uvalde – 1619 Garner Field Road
009	Vernon – 11708 Hwy 70 S
010	Weslaco – 2415 East HWY 83
012	College Station – 3380 University Drive East
014	Dallas – Main Building, 17360 Coit Road, Room 312
016	Bushland – 2301 Experiment Station Road
017	Bryan – 2870 North Harvey Mitchell Parkway, Suite 500
018	Bryan – 3100 State Highway 47
019	Overton – 1710 FM 3053 N

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B. The authorized place of use includes temporary sites, in areas not under exclusive Federal jurisdiction, throughout Texas.

10. This license is issued in accordance with Title 25 Texas Administrative Code §289.252(e), "General requirements for the issuance of specific licenses."

11. The individual designated to perform the functions of Radiation Safety Officer (RSO) for activities covered by this license is Latha Vasudevan, Ph.D., CHP. The individuals designated as Site RSO (SRSO) are as follows:

<u>Site Number</u>	<u>SRSO</u>	<u>Site Number</u>	<u>SRSO</u>
004	Randy L. Stanko, Ph.D.	009	Dariusz Malinowski
005	Mark D. Burow	010	Kranthi Kiran Mandadi, Ph.D.
007	Mustian, Joseph, T.	014	Qingyi Yu
008	Xuejun Dong, Ph.D.	016	Qingwu Xue, Ph.D.
019	Perry, George, A., Jr., Ph.D.		

12. Radioactive material shall only be used by, or under the supervision of:

<u>A. Authorized User/Principal Investigator</u>	<u>Uses</u>
Burow, Mark D.	Unsealed radioactive material
Canatella, Richard	Sealed sources in devices
Dong, Xuejun, Ph.D.	Sealed sources in devices
Foster, Jamie L., Ph.D.	Sealed sources in devices
Kurwitz, Cable	Sealed or plated sources
Lewis, Katie L., Ph.D.	Sealed sources in devices
Malinowski, Dariusz	Sealed sources in devices
Mandadi, Kranthi Kiran, Ph.D.	Unsealed radioactive material
Mustian, Joseph, T.	Sealed sources in devices

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<u>A. Authorized User/Principal Investigator</u>	<u>Uses</u>
Perry, George, A., Jr., Ph.D.	Unsealed radioactive material
Shao, Lin, Ph.D.	Unsealed radioactive material
Stanko, Randy, L., Ph.D.	Unsealed radioactive material
Tribble, Robert E.	Unsealed radioactive material
Wilkins, Richard, Ph.D.	Sealed or plated sources
Xue, Qingwu, Ph.D.	Sealed sources in devices
Yennello, Sherry J.	Unsealed radioactive material
Yu, Qingyi	Unsealed radioactive material

B. Other individuals who have successfully completed the training described in the application dated July 28, 2010.

13. The licensee shall not open sealed sources containing radioactive material or remove sources from source holders. Sealed sources or source rods containing radioactive material shall not be opened or sources removed or detached from source rods or gauges by the licensee, except as specifically authorized.
14. The licensee shall not use radioactive material in or on human beings, or in field applications where such activity is released unless otherwise provided by a specific condition of this license.
15. The licensee shall conduct at intervals not to exceed six months visual inspections and operational checks of all gauges to ensure that the equipment is in good working condition, the sources are adequately shielded, and required labeling is present and legible. A record of each inspection shall be maintained for inspection by the Agency for three years and shall include the date of the inspection, name and signature of the individual performing the inspections, equipment involved, any problems found, and what, if any, corrective action was taken.

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- 16. Any cleaning, maintenance or repair of the gauges that requires detaching the source or source rod from the gauge shall be performed only by the manufacturer or other persons specifically licensed by the Agency, the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
- 17. The licensee shall maintain the financial assurance Statement of Intent for \$225,000.00 current and in good standing.
- 18. Except as specifically provided otherwise by this license, the licensee shall possess and use the radioactive material authorized by this license in accordance with statements, representations, and procedures contained in the following:

Application dated July 28, 2010,
 Letters dated February 18, 2011, August 1, 2011, July 10, 2012, August 13, 2013, December 18, 2013,
 March 21, 2014, July 8, 2014, June 19, 2015, February 17, 2017, November 8, 2017, April 23, 2018,
 November 20, 2018, May 13, 2019, September 18, 2020 and
 Electronic mail dated March 9, 2017, March 21, 2017, May 9, 2018, December 20, 2018, December 3, 2019,
 September 27, 2020.

Title 25 TAC §289 shall prevail over statements contained in the above documents unless such statements are more restrictive than the regulations.

JLH:jlh

Date June 22, 2021

FOR THE DEPARTMENT OF STATE HEALTH SERVICES

J. Scott Kee

Digitally signed by J. Scott Kee
Date: 2021.06.22 17:01:47 -05'00'

J. Scott Kee, Program Coordinator
Medical and Academic Licensing Program