NRC FORM 374

U.S. NUCLEAR REGULATORY COMMISSION

PAGE 1 OF 6 PAGES Amendment No. 4

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 37, 39, 40, 70 and 71, 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 byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

1.	Licen PETNET Solutions, Inc.	See In accordance with letter dated February 16, 2018,	
2.	810 Innovation Drive Knoxville, TN 37932	3. License No.: 41-32720-01 is amended in its entirety to read as follows: 5. Docket No.: 030-38156 Reference No.:	
6.	Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form 8. Maximum amount that licensee may possess at any one time under this license	
Α.	Fluorine-18	A. Any O A. 20 curies total A. 20 curies total A. (1) For production, possession, or handling of radiochemicals for transfer to persons authorized to receive the licensed material pursuant to the terms and conditions of a specific license issued by the U.S. Nuclear Regulatory Commission or an Agreement State.	
		 (2) For packaging and distribution of produced radiochemicals to persons authorized to receive licensed materials pursuant to the terms and conditions of a specific license issued by the U.S. Nuclear Regulatory Commission or an Agreement State. This shall not be distributed as a radiopharmaceutical or radioactive drug. 	

NRC	FORM 374A			U.S. NUCLEAR	REGU	LATORY COMMI	SSION		PAGE 2 OF 6 PAGES
MATERIALS LICENSE			License No. Do 03			Docket or Reference No. 030-38156			
	SUPPLEMENTARY SHEET			Amendment No. 4					
6.	Byproduct, source, and/or special nuclear material	7.	Chemical and	for physical form	8.	Maximum amo may possess Dunder this lice	ount that licensee at any one time nse	9.	Authorized use
В.	Carbon-11	В.	Any	CLEAN	В.	4 curies total	9 ×	В.	Same as Item 9.A. and calibration of the licensee's instruments.
C.	Nitrogen-13	C.	Any		C.	2 curies total	C)	C.	Same as Item 9.A.
D.	Oxygen-15	D.	Any	8	D.	2 curies total	the states	D.	Same as Item 9.A.
E.	Hydrogen-3	E.	Liquid 4		Ε.	5 millicuries	total	E.	For possession and storage incidental to radionuclide production.
F.	Any byproduct material between Atomic Nos. 3 and 83 with exceptions	F.		ictivated products	F.	250 millicurie	es total	F.	Same as Item 9.E.
G.	Zinc-65	G.	Incidentally a Sealed source	ctivated products	6.	300 millicurie	es total	G.	Same as Item 9.E.
Н.	Germanium-68	H.	GF-068-D, S	M-968, disk source)	 .	15 microcuri and 50 micro	es per source ocuries total	Н.	Calibration and checking of the licensee's instruments.
Ι.	Sodium-22	I.	Sealed source RV-022, e-vi	ces (IPL Model al)	(U)	250 microcul source and 1 total	ries per millicurie	I.	Same as Item 9.H.
J.	Cobalt-57	J.	Sealed sour RV-057-5M; BM06, e-vial	ces (IPL , Moder Radqual, Model)	*	and 10 millic	per source uries total	J.	Same as Item 9.H.
К.	Cesium-137	К.	Sealed sour RV-137-200 BM06E-37)	ces (IPL, Model J; Radqual, Model	К.	250 microcu source and f total	ries per I millicurie	K.	Same as Item 9.H.
	CONDITIONS								
10.	10. Licensed material shall be used or stored only at the licensee's facilities located at 1345 West 16th Street, Indianapolis, Indiana, 46202.								

.

NRC FORM 374A U.S. NUCLEAR REGULATORY COMMISSION PAGE 3 OF 6 PAGE						
	MATERIALSLICENSE	License No. 41-32720-01	Docket or Reference No. 030-38156			
	SUPPLEMENTARY SHEET	Amendment No. 4				
	· · ·					
11.	The Radiation Safety Officer (RSO) for th	is license is Joel Readinger, R.Ph.				
		EAR REGU,				
12.	Licensed material shall only be used by,	or under the supervision of:	Ý >			
		2	0			
	Authorized User	Material and Use				
	Larry Beagle	All	Jours			
	Victor Calonico, R.Ph.	All	\sim			
	Virginia Coakley, R.Ph.	All	\bigcirc			
	Lucas Fernandez	All				
	Heather Fry, R.Ph.	All	Martin State			
	Rick Grigson, R.Ph.		All states			
	Mickey Latham		S			
	Joel Readinger, R.Ph.	All	6			
	Tim Tuohy	All in a share in a	d'			
	Larry Weider, R.Ph.	All	and the second s			
	Neil Xenias	All	*			

- 13. This license does not authorize commercial distribution of licensed material pursuant to 10 CFR 32.72 or 10 CFR 32.74, to persons generally licensed pursuant to 10 CFR Part 31 or equivalent regulations of any Agreement State, or to persons exempt from licensing pursuant to 10 CFR 30.14 through 10 CFR 30.21 inclusive, or equivalent regulations of any Agreement State.
- 14. A. Sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State. In the absence of a registration certificate, sealed sources shall be tested for leakage and/or contamination at intervals not to exceed six months, or at such other intervals as specified.

NRC FORM 374A	U.S. NUCLEAR REGULATORY COMMISSION		PAGE	4	OF	6	PAGES
MATERIALSLICENSE	License No. 41-32720-01	Docket or Reference No. 030-38156					
SUPPLEMENTARY SHEET	Amendment No. 4						
B. In the absence of a certificate from a transferor indicating that a leak test has been made within the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State, prior to the transfer, a sealed source received from another person shall not be put into use until tested and the test results received.							

- C. Sealed sources need not be tested if they contain only hydrogen 3; or they contain only a radioactive gas; or the half-life of the isotope is 30 days or less; or they contain not more than 100 microcuries of beta- and/or gamma-emitting material or not more than 10 microcuries of alpha-emitting material.
- D. Sealed sources need not be tested if they are in storage and are not being used. However, when they are removed from storage for use or transferred to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- E. The leak test shall be capable of detecting the presence of 185 becquerels (0.005 microcuries) of radioactive material on the test sample. If the test reveals the presence of 185 becquerels (0.005 microcuries) or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 30.50(c)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations.
- F. Tests for leakage and/or contamination, including leak test sample collection and analysis, shall be performed by the licensee or other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
- G. Records of leak test results shall be kept in units of becquerels (microcuries) and shall be maintained for three years.
- 15. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee, except as specifically authorized.

NRC FORM 374A	U.S. NUCLEAR REGULATORY COMM	ISSION PAGE 5 OF 6 PAGES
	License No. 41-32720-01	Docket or Reference No. 030-38156
SUPPLEMENTARY SHEET	Amendment No. 4	
16. The licensee shall conduct a physical inv Commission, to account for all sealed so maintained for three years from the date numbers, and the date of the inventory.	rentory every six months, or at other inte urces and/or devices received and poss of each inventory, and shall include the	rvals approved by the U.S. Nuclear Regulatory essed under the license. Records of inventories shall be radionuclides, quantities, manufacturer's name and model
17. The licensee is authorized to hold radioa disposal in ordinary trash provided:	ctive material with a physical half-life of I	ess than or equal to 120 days for decay-in-storage before
A. Before disposal as ordinary trash, th most sensitive scale and with no inter radiation labels shall be removed of managed as biomedical waste after	waste shall be surveyed at the contain rposed shielding to determine that its rad obliterated, except for radiation labels or they have been released from the license	er surface with the appropriate survey instrument set on its dioactivity cannot be distinguished from background. All materials that are within containers and that will be se.
B. A record of each such disposal perm of disposal, the date on which the by background dose rate, the dose rate the disposal.	itted under this license condition shall be product material was placed in storage, measured at the surface of each waste	e retained for three years. The record must include the date the radionuclides disposed, the survey instrument used, the container, and the name of the individual who performed
	~ \$ \$ \$ \$ T	

NRC FORM 374A	U.S. NUCLEAR REGULATORY COMM	ISSION PAGE 6 OF 6 PAGES
MATERIALSLICENSE	License No. 41-32720-01	Docket or Reference No. 030-38156
SUPPLEMENTARY SHEET	Amendment No. 4	
18. Except as specifically provided otherwise representations, and procedures containe those procedures that are required to be regulations shall govern unless the stater restrictive than the regulations.	e in this license, the licensee shall conduced in the documents, including any enclosed in the documents, including any enclosed in accordance with the regular ments, representations, and procedures	ct its program in accordance with the statements, osures, listed below. This license condition applies only to tions. The U.S. Nuclear Regulatory Commission's in the licensee's application and correspondence are more
A. Application dated September 4, 2009) (with cover letter dated September 11, 2	2009) (ML092580322)
B. Letter dated February 17, 2010 (ML)	60540424)	
C. Letter dated August 1, 2016 (ML162	16A603)	<u>S</u>
D. Letter dated November 21, 2016 (ML	16327A527)	
E. Letter dated February 16, 2018 (ML1	8051B141)	annak
F. Letter dated May 3, 2018 (ML18123)		
	YIND YOUND	401S
	A A A FOR	THE U. S. NUCLEAR REGULATORY COMMISSION
Date:MAY 0 8 2018	By: _ E F	Bryan A. Parker Region III