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Cardinal Health
6464 Canoga Avenue
Woodland Hills, CA 91367
818 737 4000 tel

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'04 NOV 15 A10 :33

October 25, 2004

K-4

U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406-1415

03033027

RE: Amendment Request for Radioactive Materials License Number 47-25233-01MD.

Attention Licensing:

Please amend the above referenced license to:

1. Add the name of Brooke Barringer, Pharm. D., as an authorized nuclear pharmacist. A copy of Ms. Barringer's training documentation is enclosed.
2. Change the Pharmacy Radiation Safety Officer (PRSO) from Christopher Rovnak to David Arnold, Pharm.D., R.Ph. Mr. Arnold is currently listed on the license and has met the criteria to fulfill the duties of PRSO.
3. Delete the names G. Kennedy Cawthorne, David L. Gilliland, Denise Lalanas, Jason Plummer and Victor Swinney. They are no longer Cardinal Health employees.

If you have any questions regarding this request, please contact Alison Atkiels at (818) 737-4540.

Sincerely,

Kory Kodimer, Ph.D.
Manager, Health Physics

Cc: David Arnold, Loc. 225
License File 225 (3)

Encl: Training documentation

/aa

135884

NMSS/RGNI MATERIALS-002

Brooke Barringer, Pharm. D

(Actual use of Radionuclides Under Supervision of a Qualified Instructor)

RADIONUCLIDE	MAXIMUM AMT.	WHERE	DURATION OF	TYPE OF USE
	In mCi.	EXPERIENCE	EXPERIENCE	
		WAS GAINED	actual clock hrs.	
Mo-99	12000	1	400	1,3,4,5,6
Tc-99m	500	1	380	1,2,3,4,5,6
Tl-201	125	1	300	1,3,4,5
Ga-67	30	1	3	1,3,4,5
Xe-133	200	1	10	1,3,4,5
I-123	6	1	10	1,3,4,5
I-131	200	1	10	1,3,4,5
Sr-89	5	1	4	1,3,4,5
In-111	1	1	6	1,2,3,4,5
Co-57	5	1	10	1,2,4,5
Cs-137	0.3	1	10	2,4,5
Ba-133	0.3	1	10	2,4,5

Legend for "Where experience was gained:"

1. Tri-State Nuclear Pharmacy, Huntington, W.V.

Legend for "Type of Use:"

1. Ordering, receiving and unpacking radioactive materials safely, including performance of related radiation surveys.
2. Calibration of dose calibrators, scintillation detectors, and survey meters.
3. Calculation, dispensing, and calibration of patient doses, including proper use of radiation shields.
4. Following appropriate internal control procedures to prevent mislabeling errors.
5. Learning emergency procedures to handle and contain spilled materials safely, including related procedures for decontamination, surveys, and wipe tests.
6. Elution of technetium-99m generator systems, assay of the eluate for technetium-99m and for molybdenum-99 contamination, and processing the eluate with reagent kits to prepare technetium-99m labeled radiopharmaceuticals.

Total Hours: 480 hours

Authorized Nuclear Pharmacist: _____

Chris Rovnak

Chris Rovnak, R. Ph.



**THE OHIO STATE UNIVERSITY
COLLEGE OF PHARMACY
UNIVERSITY MEDICAL CENTER**



NUCLEAR PHARMACY CERTIFICATE PROGRAM

RADIONUCLIDE HANDLING EXPERIENCE

Name: A. Brooke Barringer, Pharm.D., R.Ph.

Date: October 1, 2004

Document the actual use/handling of radioactive material under the supervision of an Authorized Nuclear Pharmacist.

RADIONUCLIDE	RADIOACTIVITY	USE see below	EXPERIENCE Actual clock hours (Include date range of experience)	LOCATION
Mo-99	10 Curies	1,2,3,4,5,6,7	9/6/04	The Ohio State University Medical Center, Columbus, OH
Tc-99m	8 Curies	1,2,3,4,5,6,7	through	
I-131	200 mCi	1,2,3,4,5,6	10/1/04	
I-123	1 mCi	1,2,3,4,5,6		
Ga-67	25 mCi	1,2,3,4,5		
Tl-201	50 mCi	1,2,3,4,5		
In-111	7.5 mCi	1,2,3,4		
Sr-89	5 mCi	1,2,3,4,5,6		
Sm-153	100 mCi	1,2,3,4,5,6		
F-18	200 mCi	1,2,3,4,5,6		
Cs-137	0.2 mCi	1,2,5		
			TOTAL HOURS: 40 hours	

Key for "Use": the number, or numbers, entered under "Use" should correspond to the handling experience for each radionuclide.

1. Ordering, shipping, receiving radioactive materials and performing related radiation surveys.
2. Calibrating, using and performing checks for proper operation of dose calibrators, scintillation detectors, survey meters, and, if applicable, instruments used to measure alpha- or beta-emitting radionuclides.
3. Calculating, assaying and safely preparing dosages for patients or human research subjects.
4. Using appropriate internal controls to avoid mistakes in the labeling and/or administration of by product material.
5. Using procedures to prevent or minimize contamination and using proper decontamination procedures.
6. Learning emergency procedures to handle and contain spilled materials safely, including related decontamination procedures, surveys and wipe tests.
7. Eluting Tc99m from generator systems, assaying the eluate for Tc99m and for Mo99 and processing the eluate with reagent kits to prepare Tc99m labeled radioactive drugs.

Authorized Nuclear Pharmacist: George H. Hinkle
George H. Hinkle, RPh, MS, BCNP

Date: October 1, 2004



THE OHIO STATE UNIVERSITY
 COLLEGE OF PHARMACY
 UNIVERSITY MEDICAL CENTER



NUCLEAR PHARMACY CERTIFICATE PROGRAM

TRAINING RECEIVED IN BASIC RADIOISOTOPE HANDLING TECHNIQUES

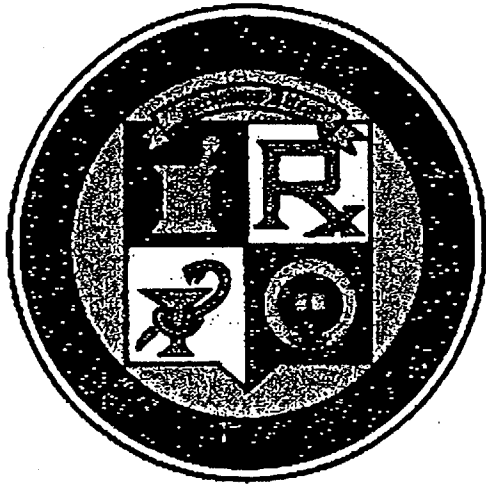
Name: A. Brooke Barringer, Pharm.D., R.Ph.

Location of Training	Date(s) of Attendance	Course Title	Total Clock Hours of Course	BREAKDOWN OF COURSE CONTENT IN CLOCK HOURS				
				Radiation Physics & Instrumentation	Radiation Protection	Math Pertaining to Radioactivity	Radiation Biology	Radiopharmaceutical Chemistry
The Ohio State University, Columbus, OH	September 6, 2004 through October 1, 2004	Nuclear Pharmacy Certificate Program	214	88	45	20	22	39
*Note: Show a breakdown of hours by institution, dates, and subjects. List each hour only once (i.e., under the most applicable subject category) TOTAL HOURS			214	88	45	20	22	39

Authorized Nuclear Pharmacist/Authorized User:

George H. Hinkle
 George H. Hinkle, RPh,MS,BCNP,FASHP,FAPhA

DATE: October 1, 2004



**The Ohio State University
College of Pharmacy
and
University Medical Center
Department of Pharmacy**



By this certificate warrants that

A. Brooke Barringer, Pharm. D.

has satisfactorily fulfilled all requirements
and completed the prescribed course

Nuclear Pharmacy Certificate Program

October 1, 2004

George A. Hinkle
Director, Nuclear Pharmacy
Associate Professor of Pharmacy

Thomas W. O'Connor
Executive Director
Council of Ohio Colleges of Pharmacy



Robert W. Buegg
Dean, College of Pharmacy

Milap C. Nahata
Chair, Pharmacy Practice
and Administration



Board of Pharmacy

REGISTERED PHARMACIST LICENSE

July 1, 2004- June 30, 2006

Amelia B. Barringer
Registered Pharmacist
License # RP0006709