Jerry D. Kennett, MD MACC FACP FSCAI Dan L. Pierce, MD FACC John B. Baird, MD FACC James T. Elliott, MD FACC John K. Boyer, MD FACC James E. K. Fairlamb, MD FACC James E. K. Fairlamb, MD FACC Henry C. Marquez: MD FACC Trung H. Tron. MD FACC Michael A. Brown. MD MS Mozow Y. Zuidema, MD PhD FACC Charles H. Tillman, MD FACP FAGC Steven M. Mackay, Do FACC FSCAI Sudhi Tyagi, MD FACC



Jason A. Rytlewski, MD John W. Verbsky, MD PhD Prakash Acharya, MD Martin Tibuakuu, MD MPH FACC Kathi Lutz, FNP-BC

Paige Klein, FNP-BC Patricia Kean, FNP-BC Patricia Kean, FNP-BC Hillary Burks, FNP-C McKenzie Kusgen, FNP-C Emily Kusgen, DNP FNP-BC Lauren Lemauer, DNP FNP-BC Tiffany Lehman, DNP FNP-C

Main Office 1605 E. Broadway Suite 300 Columbia, MO 65201 (573) 256-7700 tel (573) 256-3003 fax www.moheartcenter.com

Missouri Heart Center - Macon 404 Providence Road Macon, MO 63552 (660) 395-8914 tel (660) 395-8912 fax

Missouri Heart Center - Mexico 720 Medical Park Drive Mexico, MO 6526 (573) 581-3240 tel (573) 581-7493 fax Missouri Heart Center - Sedalia In association with Bothwell Regional Health Center 3700 W. 10th Street, Suite 200 Sedalia, MO 65301 (660) 827-1771 tel (660) 827-1422 fax

Missouri Cardiovascular Specialists, LLP d/b/a Missouri Heart Center NRC license #: 24-35185-01 1605 E. Broadway, Suite 300 Columbia, MO 65201

U.S. Nuclear Regulatory Commission Region III **Nuclear Licensing Section** 2056 Westings AVE, Suite 400 Naperville, IL 60563-2657

Subject: Request for Transfer of RSO and addition of authorized user: Dr. Mozow Y. Zuidema, MD, PhD, FACC.

Date: 9/15/2025

Dear Sir/Madam,

I am writing to formally request the authorization of Dr. Mozow Y. Zuidema, MD, PhD, FACC as an Authorized User under 10 CFR 35.100 and 35.200 Dr. Zuidema has completed 80 hours of classroom and laboratory training and 700 hours of supervised clinical experience, and meets the qualifications for the requested uses as outlined in the NRC Form 313A (AUD).

Name:	NPI	Missouri icense Number:	Contact Info:
Dr. Mozow Y. Zuidema, MD, PhD, FACC	1639376320	 MO License # 2007018559 MO License # 2014007090 	Office Address: 1605 E. Broadway Suite 300, Columbia, MO 65201 Office: 573-256-7700 Email:mzuidema@moheartcenter.com

Dr. Zuidema has demonstrated proficiency in the following areas:

Imaging and localization studies (35.200)

We are also requesting the transfer of Radiation Safety Officer from Dr. John Baird, MD to Dr. Mozow Zuidema, MD, PhD, FACC for Missouri Cardiovascular Specialists, LLP d/b/a Missouri Heart Center, NRC license #: 24-35185-01

Attached to this letter, you will find the completed NRC Form 313A (AUD) along with NRC form 313A. We kindly request your review and approval of both application requests. Should you require any additional information or documentation, please contact me at 660-395-8914 or aftonm@moheartcenter.com . Thank you for your attention to this matter.

Sincerely,

Afton Miller, MHA, RDCS, RVT, RT (R)

Director of Outreach Services

Affor In Mere, MHA, ROGA PUT, RTCR)

EXPIRES: 07/31/2026

AUTHORIZED USER TRAINING, EXPERIENCE AND PRECEPTOR ATTESTATION

Estimated burden per response to comply with this mandatory collection request: 4.3 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the FOIA, Library, and Information Collections Branch (T-8 A10M), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by email to infocallects. Resource@mc. gov, and the OMB Reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0120), Attn: Desk Officer for

[10 CFR 35.57, 35.190, 35.2	90, and 35.590]	the Nuclear Regulatory Commission, 725 17th Street I gov. The NRC may not conduct or sponsor, and a unless the document requesting or requiring the collec	person is not required to	respond to, a collection of information
Name of Proposed Authorized User		State or Territory Where Licens	ed	
Mozow Y., Zuidema, MD		Missouri		
Requested Authorization(s) (check all that	t apply)			
35.100 Uptake, dilution, and excretion	studies 🗸 35.3	200 Imaging and localization s	studies	
35.500 Sealed sources for diagnosis (specify device)			
		AND EXPERIENCE		
* Training and Experience, including boar application or the individual must have a and experience was completed. Provid related to the uses checked above.	rd certification, mus obtained related co	st have been obtained within the national state of the national state of the state	ence since th	e required training
1. Board Certification				
a. Provide a copy of the board certific				
b. For a board certification issued on the following:	or before October 2	24, 2005 that is listed in 10 Cf	FR 35.57(b)(2	?)(i), provide
(i) Documentation that the indiv	idual performed ea	ch use checked above on or b	efore Octobe	er 24, 2005.
(ii) Dates, duration, and descript each use checked above.	tion of continuing e	ducation and experience withi	n the past se	ven years for
c. Stop here.		105000 4 (4) (4)		
2. Current 35.390 Authorized User			00 40 050 0	F F7 6 05 000
a. Authorized user on Materials Lice		meeting 10 CFR 35.39		5.57 TOF 35.300
uses, or equivalent Agreement State b. Supervised Work Experience.	ate requirements se	seking authorization for 55.29	υ.	
(If more than one supervising indicopies of this section.)	vidual is necessary	to document supervised work	k experience,	provide multiple
Description of Experience		Experience/License or Number of Facility	Clock Hours	Dates of Experience*
Eluting generator systems appropriate for the preparation of radioactive drugs for imaging and localization studies, measuring and testing the eluate for radionuclidic purity, and processing the eluate with reagent kits to prepare labeled radioactive drugs				
	Total Hours	of Experience:		
Supervising Individual		License/Permit Number listing s authorized user or authorized n		
Supervisor meets the requirements b 35.290 35.390 + generator c. If board certified, provide a copy o Part II Preceptor Attestation.	experience in 32.2	290(c)(1)(ii)(G) 35.55	35.57 f	or 35.200 uses

NRC FORM 313A (AUD) (07-31-2023)

U. S. NUCLEAR REGULATORY COMMISSION

NRC FORM 313A (AUD) (07-31-2023)

AUTHORIZED USER TRAINING, EXPERIENCE AND PRECEPTOR ATTESTATION (for uses defined under 35.100, 35.200, and 35.500) I10 CER 35 57 35 190 35 290 and 35 5901(continued)

3. Training and Experience for Pro			
a. Classroom and Laboratory Train	ing.		
Description of Training	Location of Training	Clock Hours	Dates of Training*
Radiation physics and instrumentation	Harry S. Truman Memorial Veterans Hospital (HSTMVH) and University of Missouri- Columbia (UMO-C) Cardiology fellowship	20	Jan-Mar 2013 Aug-Nov 201 Feb-Mar 2014
Radiation protection	HSTMVH and UMO-C Lectures	25	Jan-Mar 2013 Aug-Nov 201 Feb-Mar 2014
Mathematics pertaining to the use and measurement of radioactivity	UMO-C Lectures	10	July 1-2011- June 30, 2012
Chemistry of byproduct material for medical use (not required for 35.590)	UMO-C Lectures	15	July 1-2011- June 30, 2012
Radiation biology	UMO-C Lectures	10	July 1-2011- June 30, 2012
(If more than one supervising inc	Total Hours of Training: 80 Impletion of this table is not required for 35.590). Initialization of this table is not required for 35.590.	k experience	,
provide multiple copies of this se Supervised Work Experience	Total Hours of Experience:	700	-
Description of Experience Must Include:	Location of Experience/License or Permit Number of Facility	Confirm	Dates of Experience
Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys	Missouri Heart Center	✓ Yes ☐ No	Jan 2021-2024
Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters	Missouri Heart Center, Mid America Isotopes, Ashland MO	Yes No	Jan 2021-2024

U. S. NUCLEAR REGULATORY COMMISSION

(07-31-2023)

AUTHORIZED USER TRAINING, EXPERIENCE AND PRECEPTOR ATTESTATION (for uses defined under 35.100, 35.200, and 35.500) [10 CFR 35.57, 35.190, 35.290, and 35.590](continued)

	•			nd 35.590](co	•	
3. Training and Experience for	Propos	sed Authorized L	Jser (continu	ıed)		
b. Supervised Work Experience	e. (cont	inued)				
Description of Experienc Must Include:	e		of Experience it Number of		Confirm	Dates of Experience*
Calculating, measuring, and sa preparing patient or human res subject dosages		Missouri Heart Co Mid America Isot	*	МО	✓ Yes	Jan 2013-Mar 2014; Jan 2021-2024
Using administrative controls to prevent a medical event involvi use of unsealed byproduct mat	ing the	Missouri Heart Co	enter		✓ Yes	Jan 2021-2024
Using procedures to contain sp byproduct material safely and u proper decontamination proced	using	Missouri Heart Co	enter		✓ Yes	Jan 2021-2024
Administering dosages of radio drugs to patients or human resusubjects		HSTMVH, Missouri Heart Ce	enter		✓ Yes	Jan 2013-Mar 2014; Jan 2021-2024
Eluting generator systems appropriate for the preparation of radioactive drugs for imaging and localization studies, measuring and testing the eluate for radionuclidic purity, and processing the eluate with reagent kits to prepare labeled radioactive drugs		Missouri Heart Center, Mid America Isotopes, Ashland MO		✓ Yes ☐ No*	Jan 2021-2024	
Supervising Individual		License/Permit Number listing supervising authorized user or an authorized nuclear training				
John B. Baird, MD			24-35185-01			
Supervisor meets the requirement of 35.190] 35.390 200 use	35.390 + g	-	tate requirements erience in 35.290(
c. For 35.590 only, provide docu	mentati	on of training on ι	ise of the dev	rice.		
Device		Type of Traini	ng	Loc	ation and Da	ates

d. For 35.500 uses only, stop here. For 35.100 and 35.200 uses, skip to and complete Part II Preceptor Attestation.

U. S. NUCLEAR REGULATORY COMMISSION

AUTHORIZED USER TRAINING, EXPERIENCE AND PRECEPTOR ATTESTATION

(for uses defined under 35.100, 35.200, and 35.500) [10 CFR 35.57, 35.190, 35.290, and 35.590](continued)	
PART II – PRECEPTOR ATTESTATION	
Note: This part must be completed by the individual's preceptor. The preceptor does not have to be the supervisin individual as long as the preceptor provides, directs, or verifies training and experience required. If more that one preceptor is necessary to document experience, obtain a separate preceptor statement from each. (Not required to meet training requirements in 35.590) By checking the boxes below, the preceptor is not attesting to the individual's "general clinical competency."	U J
First Section	
Check one of the following for each use requested:	
For 35.190	
I attest that has satisfactorily completed the 60 hours of training and	
Name of Proposed Authorized User	
experience, including a minimum of 8 hours of classroom and laboratory training, required by 10 CFR 35.190(classical and is able to independently fulfill the radiation safety-related duties as an authorized user for the medical uses authorized under 10 CFR 35.100.	
For 35.290	
Mozow Y. Zuidema, MD has satisfactorily completed the 700 hours of training	
Name of Proposed Authorized User	
and experience, including a minimum of 80 hours of classroom and laboratory training, required by 10 CFR 35.290(c)(1), and is able to independently fulfill the radiation safety-related duties as an authorized user for the medical uses under 10 CFR 35.100 and 35.200.	
Second Section	
Complete one of the following for attestation and signature:	
✓ Authorized User:	
✓ I meet the requirements below, or equivalent Agreement State requirements, as an authorized user for:	
35.190 35.290 35.390 35.390 + generator experience 35.57 for 35.200 uses	
Residency Program Director:	
I affirm that the attestation represents the consensus of the residency program faculty where at least one faculty member is an authorized user who meets the requirements below or equivalent Agreement State requirements for:	
35.190 35.290 35.390 35.390 + generator experience 35.57 for 35.200 uses	
☐ I affirm that this facility member concurs with the attestation I am providing as program director.	
I affirm that the residency training program is approved by the:	
Residency Review Committee of the Accreditation Council for Graduate Medical Education	

I affirm that the residency training program is approved by the:			
Residency Review Committee of the Accreditation Council fo	r Graduate M	ledical Education	
Royal College of Physicians and Surgeons of Canada			
Council on Post-Graduate Training of the American Osteopat	hic Association	on	
I affirm that the residency training program includes training and	experience s _i	pecified in:	
35.190 35.290			
Name of Facility: Missouri Cardiovascular Specialists, LLP d/b/a Missouri Heart Center	License/Permit N 24-35185-01	umber:	
Name of Preceptor or Residency Program Director (Typed or Printed)	et.	Telephone Number	Date
John B. Baird, MD		(573) 256-7700	9/12/2025
Signature			
NRC FORM 313A (AUD) (0 (3/2/3)			PAGE

to Be Recognized as a RSO or ARSO for the Additional Medical Uses Checked Above a. Use the table in section 5.c. to describe training in radiation safety, regulatory issues, and emergency procedures

- for the additional types of medical use for which recognition as RSO or ARSO is sought.
- b. If board certified, provide a copy of the certificate and stop here.
- c. If not board certified and not listed on a medical use license as an RSO before January 14, 2019, skip to and complete Part II Preceptor Attestation.

OR

3. Authorized User (AU), Authorized Medical Physicist (AMP), or Authorized Nuclear Pharmacist (ANP) identified on a license or permit in accordance with 10 CFR 35.50 (c)(2)

- a. Provide license number.
- b. Use the table in section 5.c. to describe training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license.
- c. Stop here.

OR

NRC FOF (07-31-202	RM 313A (RSO)		NUCLEAR REGUL	ATORY COMMISSION
(07-37-202	5,	RADIATION SAFETY OFFICER OR ASSOCIATE RADIATION SAFETY OFFICE	ER	
	TRAINING, EXPERIENCE	AND PRECEPTOR ATTESTATION [10 CF)] (continued)
4.	Individuals applying simultaneo	usly to be the RSO and AU on a new license		
	a. Documentation of training and	experience to be a new AU is attached		
	b. The new license application is	attached.		
	c. Stop here.	OR		
∠ 5. \$	Structured Educational Program	for Proposed RSO or ARSO		
8.	a. Classroom and Laboratory Tra	ining		
	Description of Training	Location of Training	Clock Hours	Dates of Training*
	Radiation physics and instrumentation	Harry S. Truman Memorial Veterans Hospital (HSTMVH) and University of Missouri- Columbia (UMO-C) Cardiology Fellowship lectures	20	Jan-Mar 2013 Aug-Nov 2013 Feb-Mar 2014
	Radiation protection	HSTMVH and UMO-C lectures	25	Jan-Mar 2013 Aug-Nov 2013 Feb-Mar 2014
	Mathematics pertaining to the use and measurement of radioactivity	UMO-C lectures	10	July 1 2011-June 30, 2012

Total Hours of Training:

UMO-C lectures

UMO-C lectures

10

15

July 1 2011-June 30, 2012

July 1 2011-June 30, 2012

Radiation biology

Radiation dosimetry

(07-31-2023)

RADIATION SAFETY OFFICER OR ASSOCIATE RADIATION SAFETY OFFICER TRAINING, EXPERIENCE AND PRECEPTOR ATTESTATION [10 CFR 35.57, 35.50] (continued)

5. Structured Educational Program for Proposed RSO or ARSO (continued)

b. Supervised Radiation Safety Experience

(If more than one supervising individual is necessary to document supervised work experience, provide multiple copies copies of this section.)

Description of Experience	Location of Training/ License or Permit Number of Facility	Dates of Training*
Shipping, receiving, and performing related radiation surveys	Missouri Heart Center	Jan 2021-2024
Using and performing checks for proper operation of instruments used to determine the activity of dosages, survey meters, and instruments used to measure radionuclides	Mid America Isotopes, Ashland, MO Missouri Heart Center	Jan 2021-2024
Securing and controlling byproduct material	Missouri Heart Center	Jan 2021-2024
Using administrative controls to avoid mistakes in administration of byproduct material	Missouri Heart Center	Jan 2021-2024
Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedures	Missouri Heart Center	Jan 2021-2024
Using emergency procedures to control byproduct material	Missouri Heart Center	Jan 2021-2024
Disposing of byproduct material	Missouri Heart Center	Jan 2021-2024
Licensed Material Used (e.g., 35.100, 35.200, etc.)+	Mid America Isotopes, Ashland, MO	3/4/2014
35.200		

Choose all applicable sections of 10 CFR Part 35 to describe radioisotopes and quantities used: 35.100, 35.200, 35.300, 35.400, 35.500, 35.600 remote afterloader units, 35.600 teletherapy units, 35.600 gamma stereotactic radiosurgery units, emerging technologies (provide list of devices).

(07-31-2023)

RADIATION SAFETY OFFICER OR ASSOCIATE RADIATION SAFETY OFFICER TRAINING, EXPERIENCE AND PRECEPTOR ATTESTATION [10 CFR 35.57, 35.50] (continued)

5. Structured Educational Program for Propo	end PSO	or APSO (continued)	# F 5, 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
*		or ARSO (continued)	
b. Supervised Radiation Safety Experience (cor			vida multipla
(If more than one supervising individual is necessopies of this section.)	sary to doc	ument supervisea work expenence, pro	viae muitipie
Supervising Individual		License/Permit Number listing supervising Radiation Safety Officer or Associate Radia	individual as a ition Safety Officer
John B. Baird, MD		34-35185-01	
The supervising individual is authorized as the for the following medical uses:		Radiation Safety Officer or the Associate Radiation Safety Officer	
	:	-	
35.300 35.300 35.300		35.400	
35.500 35.600 (remote afterloader)	ļ	35.600 (teletherapy)	\
35.600 (gamma stereotactic radiosurgery)		35.1000 (
c. Describe training in radiation safety, regulatory on the license for the RSO or types of use for	y issues, ar which the /	nd emergency procedures for all types of ARSO will be listed on the license.	f medical use
Description of Training		Training Provided By	Dates of Training*
Radiation safety, regulatory issues, and emergency procedures for 35.100, 35.200, and 35.500 uses	Mid Ameri	ca Isotopes	Aug-Sept 2025
Radiation safety, regulatory issues, and emergency procedures for 35.300 uses			
Radiation safety, regulatory issues, and emergency procedures for 35.400 uses		gran.	
Radiation safety, regulatory issues, and emergency procedures for 35.600 - teletherapy uses	,		
Radiation safety, regulatory issues, and emergency procedures for 35.600 - remote afterloader uses			
Radiation safety, regulatory issues, and emergency procedures for 35.600 - gamma stereotactic radiosurgery uses			
Radiation safety, regulatory issues, and emergency procedures for 35.1000, specify use(s):			

RADIATION SAFETY OFFICER OR ASSOCIATE RADIATION SAFETY OFFICER

TRAININ	G, EXPERIENCE AND PRECEPTO	OR ATTESTATION [10 CFR 35.57, 35.50] (continued)
5. Structured Educ	cational Program for Proposed RSO	or ARSO (continued)
c. Training in radiat license (continue		gency procedures for all types of medical use on the
RSO. ARSO. AU. AMP. O	Ial If training was provided by supervising or ANP. (If more than one supervising document supervised training, provide ge.)	License/Permit Number listing supervising individual
Brent McHugh, Pharn	nD	24-26241-01MD
License/Permit lists	supervising individual as:	
Authorized		
Authorized as	35.200 35.300	35.400
35.500	35.600 (remote afterloader)	35.600 (teletherapy)
35.600 (ga	amma stereotactic radiosurgery)	35.1000 ()
d. Skip to and comp	olete Part II Preceptor Attestation.	
	PART II PRECEPT	OR ATTESTATION
individual as lo	ong as the preceptor provides, directs, o	ptor. The preceptor does not have to be the supervising or verifies training and experience required. If more than obtain a separate preceptor statement from each.
	cational Program for Proposed RSO	or ARSO
✓ I attest that	Mozow Y. Zuidema, MD	has satisfactorily completed
	Name of Proposed RSO/ARSO	
a structural of full-time ra	educational program consisting of both adiation safety experience as required l	200 hours of classroom and laboratory training and one year by 10 CFR 35.50(b)(1).
Second Section		AND
	Mozow Y. Zuidema, MD	has training in
	Name of Proposed RSO/ARSO	
radiation saf	ety, regulatory issues, and emergency	procedures for the following types of use:
Check all that a	pply:	
	☑ 35.200	
	oral administration of less than or equal which a written directive is required	to 33 millicuries of sodium iodide I-131, for
	oral administration of greater than 33 m	
i	Parenteral administration of any radioad ts electron emission, beta radiation cha of less than 150 keV, for which a writter	ctive drug that contains a radionuclide that is primarily used for tracteristics, alpha radiation characteristics, or photon energy in directive is required

NRC FORM 313A (RSO) (07-31-2023)	u. s. nuclear regulatory commiss RADIATION SAFETY OFFICER OR ASSOCIATE RADIATION SAFETY OFFICER ING, EXPERIENCE AND PRECEPTOR ATTESTATION [10 CFR 35.57, 35.50] (continued
	PART II - PRECEPTOR ATTESTATION (continued)
Check all that	t apply:
35.500	
35.600	remote afterloader units
35.600	teletherapy units
35.600	gamma stereotactic radiosurgery units
35.1000	emerging technologies, including:
35.1000	erreiging teermologies, moldang.
	п.
Third Section	AND
✓ I attest that	Mozow Y. Zuidema, MD
_	Name of Proposed Radiation Safety Officer or Associate Radiation Safety Officer
is able to in	dependently fulfill the radiation safety-related duties as:
•	A Radiation Safety Officer for a medical use licensee.
	OR
	OR An Associate Radiation Safety Officer for a medical use licensee.
Fourth Section Complete the followin	
Complete the followin	An Associate Radiation Safety Officer for a medical use licensee.
Complete the followin	An Associate Radiation Safety Officer for a medical use licensee.

John B. Baird, MD

Signature

Name of Preceptor (Typed or printed)

Date

09/12/2025

Telephone Number

(573) 256-7700

From: <u>Magdalena Gryglak</u>
To: <u>Martha Pavon</u>

Cc: <u>Tammy Tomczak</u>; <u>Sandy Pavon</u>

Subject: FW: Re: RE: Amendment request for add a new AU and RSO- NRC license no. 24-35185-01 for Missouri Heart

Center

Date: Monday, September 15, 2025 4:18:51 PM

Attachments: nrc rso aud submit 2025.pdf

665 647735 Additional Information.pdf

Hello,

Please place in ADAMS.

Thank you

Magda

From: Afton Miller <aftonm@moheartcenter.com> **Sent:** Monday, September 15, 2025 11:31 AM

To: Magdalena Gryglak < Magdalena. Gryglak@nrc.gov> **Cc:** Brian McVey < bmcvey@radiopharmacy.com>

Subject: [External_Sender] Re: RE: Amendment request for add a new AU and RSO- NRC license no. 24-35185-01 for Missouri Heart Center

Good morning Magdalena,

Please find the attached (signed) amendments requested to add Dr. Mozow Y. Zuidema, MD as an authorized user and to transfer RSO from Dr. John Baird, MD to Dr. Mozow Y. Zuidema, MD.

Please find the attached documentation.

We look forward to hearing from you.

Sincerely,

Afton Miller

Missouri Heart Center

Director of North Central Outreach Services

573-881-5257 cell

660-395-8914 office