

**2022 Communication Log for the  
American Board of Nuclear Medicine**

When the NRC communicated with specialty boards, email communications were retained as official records. Phone calls and/or meetings were summarized in writing. The following correspondence is included in ADAMS as publicly available to ensure that the NRC meets the agency's Official Record goals.

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**From:** Fisher, Jennifer  
**Sent:** Friday, July 29, 2022 10:38 AM  
**To:** gsegall@abnm.org  
**Cc:** Ayoade, Maryann <maryann.ayoade@nrc.gov>; Valentin-Rodriguez, Celimar <Celimar.Valentin-Rodriguez@nrc.gov>; Maria Watts <mwatts@abnm.org>; Kirk Frey MD <kfrey@abnm.org>; ABNM <abnm@abnm.org>  
**Subject:** NRC Evaluation of Specialty Boards - ABNM

Dear Dr. Segall,

Thank you for participating in the NRC specialty board review. The following are attached for your review:

[ML22125A247 Evaluation of NRC Recognized Specialty Boards](#)

ML22145A560 Completion of the Review for Continued Recognition by the NRC - ABNM

Please let us know if you have any questions.

With Kinds Regards,

Jenny Fisher  
Medical Safety and Events Assessment Branch  
Division of Materials Safety, Security, State, and  
Tribal Programs  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
[Jennifer.Fisher@nrc.gov](mailto:Jennifer.Fisher@nrc.gov) (she/hers) 301-415-1456

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ML22161A536

**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>  
**Sent:** Thursday, May 26, 2022 11:20 PM  
**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>  
**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; Kirk Frey MD <[kfrey@abnm.org](mailto:kfrey@abnm.org)>; ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>  
**Subject:** [External\_Sender] Re: ABNM - Letter from U.S. NRC

Ms. Ayoade,

The ABNM response letter is attached, including the sample certificates you requested in your email sent on May 11.

Thank you for your help in preparation.

George

George Segall, MD  
Executive Director  
[American Board of Nuclear Medicine](#)  
1030 Highlands Plaza Drive - 511E  
St. Louis MO 63110

Office: 314 367-2225  
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Website: <http://www.abnm.org>



ATTACHMENT:

[View ADAMS Properties ML22151A323](#)  
[Open ADAMS Package \(American Board of Nuclear Medicine 2nd Response Letter and Certificates\)](#)

On May 23, 2022, at 2:07 PM, Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)> wrote:

Great.

Thank you,

*Maryann*

**Maryann Ayoade**  
Medical / Health Physicist  
Division of Materials Safety, Security,  
State, and Tribal Programs  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
[Maryann.Ayoade@nrc.gov](mailto:Maryann.Ayoade@nrc.gov) | [Teams Chat](#) |

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safety and security,  
engaged people,  
reliable relationships, and  
smart regulatory solutions

ML22161A536

**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>  
**Sent:** Monday, May 23, 2022 4:02 PM  
**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>  
**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; Kirk Frey MD <[kfrey@abnm.org](mailto:kfrey@abnm.org)>; ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>  
**Subject:** [External\_Sender] Re: ABNM - Letter from U.S. NRC

Ms. Ayoade,

Thank you. The ABNM will formally respond by letter, and send you copies of the ABNM certificates with a Not Valid watermark, as requested.

George

George Segall, MD  
Executive Director  
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1030 Highlands Plaza Drive - 511E  
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Website: <http://www.abnm.org>

<image002.png>

On May 23, 2022, at 12:19 PM, Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)> wrote:

Good Afternoon Dr. Segall,


Thank you for clarifying the sections of your draft revised webpage content based on my suggestions in my May 18<sup>th</sup> email and providing clarifying responses to my questions.

Please send the updated version of the sample certificate along with the formal response letter referencing the changes as you have described in your email (please include the date of the change). We understand that signatures on the certificates may change, but we look beyond that at the format (including the boards logos) and the wording on the certificates. Note that a change that involves a logo (in your case – adding a logo) is also one that needs to be submitted to the NRC (along with a copy of the revised certificate).

Also, note that the sample certificates you provide should include a “Not Valid” watermark across the text of each certificate (similar to the version on the NRC specialty board webpage - (<https://www.nrc.gov/materials/miau/med-use-toolkit/spec-board-cert.html>)).

Regards,

*Maryann*

<p><b>Maryann Ayoade</b> Medical / Health Physicist Division of Materials Safety, Security, State, and Tribal Programs Office of Nuclear Material Safety and Safeguards U.S. Nuclear Regulatory Commission <a href="mailto:Maryann.Ayoade@nrc.gov">Maryann.Ayoade@nrc.gov</a>   <a href="#">Teams Chat</a>   301-415-0862</p>	<p><b>MSST Vision:</b> Active partnership and trustworthy leadership for... safety and security, engaged people, reliable relationships, and smart regulatory solutions</p> 
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**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>  
**Sent:** Friday, May 20, 2022 11:47 AM  
**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>  
**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; Kirk Frey MD <[kfrey@abnm.org](mailto:kfrey@abnm.org)>; ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>  
**Subject:** [External\_Sender] Re: ABNM - Letter from U.S. NRC

Ms. Ayoade,

Yes, the ABNM will formally respond by letter as requested in your email sent on May 11, and will send copies of our certificates, with dates of use. Last year we changed the font on our certificate, and added the ABMS logo. We did not change the text. Should we send this version? Does the ABNM need to send a copy of the certificate to the NRC each time minor changes are made?

I have added the text you highlighted in yellow in your May 19 email ("requiring a written directive") to the Section 2 of the first attachment to this email.

Regarding your comment about the training requirements described in 10 CFR 35.390(a), I have added the text highlighted in green to the second attachment to this email (which will be Section 1 on the ABNM website).

To be eligible to take the ABNM certification examination, *all* physicians must meet the training and experience required by the NRC in basic radionuclide handling techniques and radiation safety applicable to the medical use of unsealed byproduct material, **in the following categories and successfully complete residency training in a radiation therapy or nuclear medicine training program or a program in a related medical specialty approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education, the Royal College of Physicians and Surgeons of Canada, or the Council on Postdoctoral Training**

of the American Osteopathic Association. The training must include 700 hours of training and experience as described below.

There are no new pathways in Section 2 versus the pathways currently listed on the website. The same pathways have been reorganized in the order of presentation, with some revision of text for clarity.

I call your attention to Section 6. Alternate pathway for physician certified in Nuclear Medicine outside the United States and Canada. These physicians qualify for ABNM certification through 3-years of work experience rather than residency training in the United States. They are already authorized users under 35.390 at the institutions where they practice, according to the procedure described at <https://www.nrc.gov/docs/ML0831/ML083190725.pdf>.

George

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Website: <http://www.abnm.org>

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On May 19, 2022, at 8:14 AM, Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)> wrote:

Good morning Dr. Segall,

I just realized I have not received a response to the email I sent on May 11<sup>th</sup> (see blue highlighted section below) regarding your April 22<sup>nd</sup> letter and the second ABNM sample certificate. Can you please review and respond?

Thank you!

*Maryann*

**Maryann Ayoade**

Medical / Health Physicist

Division of Materials Safety, Security,  
State, and Tribal Programs

Office of Nuclear Material Safety and Safeguards

<image002.png>

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ML22161A536

U.S. Nuclear Regulatory Commission  
[Maryann.Ayoade@nrc.gov](mailto:Maryann.Ayoade@nrc.gov) | [Teams Chat](#) |  
301-415-0862

**From:** Ayoade, Maryann  
**Sent:** Wednesday, May 18, 2022 3:41 PM  
**To:** George Segall <gsegall@abnm.org>  
**Cc:** Maria Watts <mwatts@abnm.org>; Kirk Frey MD <kfrey@abnm.org>; ABNM <abnm@abnm.org>  
**Subject:** RE: Re: ABNM - Letter from U.S. NRC

Good Afternoon Dr. Segall,

Thank you for providing the updates. I have no further comments on the first attachment (Section 1) which I already reviewed.

Regarding the second attachment – Section 2, please clarify in the 1<sup>st</sup> paragraph that the training and experience requirements should be applicable to uses “requiring a written directive.” See yellow highlight below.

In addition to the training and experience required by the NRC in basic radionuclide handling techniques and radiation safety applicable to the medical use of unsealed byproduct material **requiring a written directive** described in Section 1, to be eligible to take the ABNM certification examination physicians must also successfully complete the education and training described in the ACGME Nuclear Medicine program requirements. Training must include:

Also, I noticed that Section 2 seems to have some new pathways that may be different from what is currently on the ABNM website and it is not clear if your criteria is for candidates to complete the required NRC training and experience in a nuclear medicine or radiation therapy related residency program. As discussed during our telephone conversation on April 21st and my email sent April 25<sup>th</sup>, please note that for the board to continue to be recognized by the NRC as meeting the training and experience requirements in 10 CFR 35.390, **the candidates must successfully complete the required training (700hrs) in a radiation therapy or nuclear medicine training program or a program in a related medical specialty (that is radiation therapy related)** in accordance with 10 CFR 35.390(a). Please confirm and clarify that in this section of your criteria.

Warm Regards,

*Maryann*

**Maryann Ayoade**  
Medical / Health Physicist  
Division of Materials Safety, Security,  
State, and Tribal Programs  
Office of Nuclear Material Safety and Safeguards  
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**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>  
**Sent:** Wednesday, May 18, 2022 12:48 AM  
**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>  
**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; Kirk Frey MD <[kfrey@abnm.org](mailto:kfrey@abnm.org)>; ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>  
**Subject:** [External\_Sender] Re: ABNM - Letter from U.S. NRC

Ms. Ayoade,

The draft of the reorganized education and training section on the ABNM website is attached. Section 1 is the description of NRC requirements, which you have already reviewed, but is attached here for convenience.

The second document contains the additional ABNM education and training requirements for certification, which have been reorganized into sections 2-6.

Let me know if you have any comments or questions.

Thank you,  
George

George Segall, MD  
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Website: <http://www.abnm.org>



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On May 16, 2022, at 9:55 AM, George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)> wrote:

Yes, for sure. The entire education and training section on the ABNM webpage is being revised for clarity. I will send you a draft for comment by tomorrow.

George Segall, MD  
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ML22161A536

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---

On May 16, 2022, at 9:52 AM, Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)> wrote:

Good Afternoon Dr. Segall,

I just wanted to follow up with you on my email from last Wednesday. Are you able to provide a response this week?

Let me know if you have any questions or need further clarification.

Regards,

*Maryann*

**Maryann Ayoade**

Medical / Health Physicist

Division of Materials Safety, Security,  
State, and Tribal Programs

Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission

[Maryann.Ayoade@nrc.gov](mailto:Maryann.Ayoade@nrc.gov) | [Teams Chat](#) |

301-415-0862

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<image001.png>

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**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>

**Sent:** Wednesday, May 11, 2022 1:46 PM

**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>

**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; Kirk Frey MD <[kfrey@abnm.org](mailto:kfrey@abnm.org)>; ABNM  
<[abnm@abnm.org](mailto:abnm@abnm.org)>

**Subject:** [External\_Sender] Re: ABNM - Letter from U.S. NRC

Will do.

George Segall, MD

Executive Director

[American Board of Nuclear Medicine](#)

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Email: [abnm@abnm.org](mailto:abnm@abnm.org)

Website: <http://www.abnm.org>

ML22161A536





On May 11, 2022, at 10:37 AM, Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)> wrote:

Good Afternoon Dr. Segall,

Can you please review the ABNM letter dated April 22<sup>nd</sup> for any changes that need to be made based on our correspondence in April (20<sup>th</sup>, 21<sup>st</sup>, 25<sup>th</sup>, 26<sup>th</sup>, and 28<sup>th</sup>) and May (2<sup>nd</sup>, 3<sup>rd</sup>, 6<sup>th</sup>, 9<sup>th</sup>, and 10<sup>th</sup>), and re-submit a signed copy along with the final version of the changes to the ABNM website. Note that this letter and all correspondence will be added to our public ADAMS library, unless you identify that there is information that should not be made public.

Also, your initial response letter dated April 14, 2022, includes only 1 certificate. We currently have 2 certificates listed on our website (<https://www.nrc.gov/materials/miau/med-use-toolkit/spec-board-cert.html>) that is recognized by the NRC. The other certificate which you did not include in your response we have listed as a sample certificate for date range from October 20, 2005 to 2007 (<https://www.nrc.gov/materials/miau/miau-reg-initiatives/abnm-certificate.pdf>). Please review and confirm that the certificate is still valid. If the certificate is no longer valid, provide the date that it stopped being issued.

Regards,

*Maryann*

**Maryann Ayoade**

Medical / Health Physicist  
Division of Materials Safety, Security,  
State, and Tribal Programs  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
[Maryann.Ayoade@nrc.gov](mailto:Maryann.Ayoade@nrc.gov) | [Teams Chat](#) |  
301-415-0862

<image002.png>

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**From:** Ayoade, Maryann

**Sent:** Tuesday, May 10, 2022 6:14 PM

**To:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>

**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; Kirk Frey MD <[kfrey@abnm.org](mailto:kfrey@abnm.org)>; ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>

**Subject:** RE: Re: ABNM - Letter from U.S. NRC

Glad to be of assistance. I will be on the watch out for your email. We will also communicate with you once we complete our review and will let you know if we have any questions.

Regards,

ML22161A536

*Maryann*

**Maryann Ayoade**

Medical / Health Physicist  
Division of Materials Safety, Security,  
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Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
[Maryann.Ayoade@nrc.gov](mailto:Maryann.Ayoade@nrc.gov) | [Teams Chat](#) |  
301-415-0862

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**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>  
**Sent:** Tuesday, May 10, 2022 4:42 PM  
**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>  
**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; Kirk Frey MD <[kfrey@abnm.org](mailto:kfrey@abnm.org)>; ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>  
**Subject:** [External\_Sender] Re: ABNM - Letter from U.S. NRC

Thank you very much. I will let you know when the ABNM website has been updated.

George

George Segall, MD  
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St. Louis MO 63110

Office: 314 367-2225  
**Email:** [abnm@abnm.org](mailto:abnm@abnm.org)  
**Website:** <http://www.abnm.org>

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On May 10, 2022, at 2:16 PM, Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)> wrote:

Hi Dr. Segall,

This looks good. I have no further comments/questions.

Regards,

*Maryann*

**Maryann Ayoade**

Medical / Health Physicist  
Division of Materials Safety, Security,  
State, and Tribal Programs  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
[Maryann.Ayoade@nrc.gov](mailto:Maryann.Ayoade@nrc.gov) | [Teams Chat](#) |  
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ML22161A536

**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>  
**Sent:** Tuesday, May 10, 2022 3:55 PM  
**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>  
**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; Kirk Frey MD <[kfrey@abnm.org](mailto:kfrey@abnm.org)>; ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>  
**Subject:** [External\_Sender] Re: ABNM - Letter from U.S. NRC

Ms. Ayoade,

In reviewing your emails after sending the final copy, I thought it would be a good idea to add the text highlighted in yellow, which I copied directly from your email sent on April 26. Please use the attached clean copy when doing your review.

George

George Segall, MD  
Executive Director  
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Email: [abnm@abnm.org](mailto:abnm@abnm.org)  
Website: <http://www.abnm.org>

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On May 10, 2022, at 10:58 AM, George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)> wrote:

I did mean to delete the text, and thank you again.

Please look at the final copy which is attached, and let me know if it conforms to NRC regulations. If the answer is yes, we will publish it on the ABNM website, and let you know when this section is ready for your review on-line.

George

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Website: <http://www.abnm.org>

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On May 10, 2022, at 9:59 AM, Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)> wrote:

ML22161A536

Hi Dr. Segall,

This looks good. I'm assuming you meant to delete the following (see text in strikethrough below).

**10 CFR 35.290 Imaging and localization studies**

A 10 CFR 35.390 authorized user must have the following *additional* work experience applicable to imaging and localization studies, ~~as well as to the medical use of unsealed byproduct material for uptake, dilution, and excretion studies.~~

Regards,

*Maryann*

<p><b>Maryann Ayoade</b> Medical / Health Physicist Division of Materials Safety, Security, State, and Tribal Programs Office of Nuclear Material Safety and Safeguards U.S. Nuclear Regulatory Commission <a href="mailto:Maryann.Ayoade@nrc.gov">Maryann.Ayoade@nrc.gov</a>   <a href="#">Teams Chat</a>   301-415-0862</p>	<p><b>MSST Vision:</b> Active partnership and trustworthy leadership for... safety and security, engaged people, reliable relationships, and smart regulatory solutions</p>
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**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>  
**Sent:** Tuesday, May 10, 2022 11:32 AM  
**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>  
**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; Kirk Frey MD <[kfrey@abnm.org](mailto:kfrey@abnm.org)>; ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>; Fisher, Jennifer <[Jennifer.Fisher@nrc.gov](mailto:Jennifer.Fisher@nrc.gov)>  
**Subject:** [External\_Sender] Re: ABNM - Letter from U.S. NRC

Ms. Ayoade, I appreciate your careful review and attention to detail. Yes, I was using a previous (outdated) version of NRC regulations for the work experience required under 10 CFR 35.390(b)(1)(ii)(G). I have corrected the text.

I also deleted the text that goes beyond NRC regulations. It's best that this section on the ABNM website conforms as close as possible to NRC regulations. I also updated the Preceptor Attestation section using the current regulations.

All of the deleted text, and all the added text, are highlighted in yellow in the attached revised version. Let me know if the attached revised version needs additional revision. If not, I will send you a clean copy for final review.

Thank you,  
George

George Segall, MD  
Executive Director  
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ML22161A536

On May 10, 2022, at 8:31 AM, Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)> wrote:

Good morning Dr. Segall,

This looks good. I have one minor item that needs to be corrected and two items to note (for your consideration).

1. You use outdated rule language for the work experience requirement for the third category of clinical case work in 10 CFR 35.390. Note that the medical regulations in 10 CFR Parts 30, 32, and 35, were updated and the final rule became effective on January 14, 2019 (Agreement States have 3yrs from that effective date). The requirement in 10 CFR 35.390(b)(1)(ii)(G) currently reads (see yellow highlight):

The work experience must involve—

...

(3) Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its electron emission, beta radiation characteristics, alpha radiation characteristics, or photon energy of less than 150 keV, for which a written directive is required; and

2. Note that a 10 CFR 35.300 user with 10 CFR 35.390 training and experience, needs to only complete the additional supervised work experience requirement in 10 CFR 35.290(c)(1)(ii)(G) in order to become an AU for medical uses under 10 CFR 35.200. Additional supervised work experience in “Administering dosages of radioactive drugs to patients or human research subjects not requiring a written directive;” is acceptable, but is not required.
3. The revised language in red font in the Preceptor Attestation section limits the preceptor AU requirement to meeting all the training and experience requirements in 10 CFR 35.290, and not just the work experience in generator elution in 10 CFR 35.290(c). Note that this is acceptable, but is not required.

Note that with your combined criteria for training and experience in 10 CFR 35.390 and 10 CFR 35.290(c)(1)(ii)(G), the regulations require that a preceptor AU must meet the requirements in 10 CFR 35.57, or **35.390 and 35.290(c)(1)(ii)(G)**, or equivalent Agreement State requirements for uses under 10 CFR 35.300 and 35.200.

Also note that there is an additional option for the attestation to be obtained from a residency program director as described in 10 CFR 35.290(c)(2)(ii) and 35.390(b)(2)(ii). The written attestation must be obtained from the residency program director who affirms in writing that the attestation represents the consensus of the residency program faculty where at least one faculty member is an AU that meets the requirements in 10 CFR 35.57, or 10 CFR 35.390 and 35.290(c)(1)(ii)(G), or equivalent Agreement State requirements, has experience in administering dosages in the same dosage category or categories as the individual requesting authorized user status, and concurs with the attestation provided by the residency program director. The residency training program must be approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Council on Postdoctoral Training of the American Osteopathic Association and must include training and experience specified in paragraph 10 CFR 35.290(c)(1) and 35.390(b)(1).

Please feel free to give me a call or send an email if you still have additional questions or need clarification.

Regards,

*Maryann*

**Maryann Ayoade**

Medical / Health Physicist

Division of Materials Safety, Security,  
State, and Tribal Programs

Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission

[Maryann.Ayoade@nrc.gov](mailto:Maryann.Ayoade@nrc.gov) | [Teams Chat](#) |

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<image002.png>

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---

**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>

**Sent:** Monday, May 9, 2022 10:45 AM

**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>

**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; Kirk Frey MD <[kfrey@abnm.org](mailto:kfrey@abnm.org)>; ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>

**Subject:** [External\_Sender] Re: ABNM - Letter from U.S. NRC

Ms. Ayoade,

I agree that separating the work experience for 10 CFR 35.290 and 10 CFR 35.390 makes it easier to understand. I reordered the presentation of the requirements, starting with 10 CFR 35.390. Additionally, I added the text in blue under 10 CFR 35.290 (see attached).

Thank you,  
George

George Segall, MD  
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Website: <http://www.abnm.org>

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On May 6, 2022, at 12:32 PM, Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)> wrote:

Good Afternoon Dr. Segall,

I completed review of the revised Combined Requirements summary. Note that as you have included the work experience related to generator elution training and administering dosages of radioactive drugs to patient or human research subjects not requiring a written directive, these

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work experience areas cannot be counted towards the 700 hours required for 10 CFR 35.390, and should be separated.

Note that the regulations do not specify the number of extra hours that is required for the generator elution work experience for a 10 CFR 35.390 AU (see 10 CFR 35.290(b). The same goes for extra hours for work experience in administering dosages not requiring a written directive. A 10 CFR 35.390 AU already has experience administering dosages requiring a written directive, and would meet the requirement to be an AU for uses under 10 CFR 35.100.

Additionally, note that the required work experience in generator elution training and the working experience in administering dosages of radioactive drugs to patient or human research subjects not requiring a written directive – have to be applicable to imaging and localization studies, as well as to the medical use of unsealed byproduct material for uptake, dilution, and excretion studies.

Again, I hope this helps. Let me know if you have additional questions or need further clarification.

Regards,

*Maryann*

**Maryann Ayoade**

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U.S. Nuclear Regulatory Commission

[Maryann.Ayoade@nrc.gov](mailto:Maryann.Ayoade@nrc.gov) | [Teams Chat](#) |  
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<image002.png>

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**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>

**Sent:** Tuesday, May 3, 2022 7:37 PM

**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>

**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; Kirk Frey MD <[kfrey@abnm.org](mailto:kfrey@abnm.org)>; ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>

**Subject:** [External\_Sender] Re: ABNM - Letter from U.S. NRC

Ms. Ayoade,

The ABNM requires all physicians who want to be certified by the ABNM to have training and experience required for both 35.290 and 35.390, but I understand that supervised work experience may be obtained under multiple authorized users, and not all supervisors will be authorized users for 35.290 and 35.390. I have revised the summary of required training and experience to make that point clearer, in accordance with your comments (changes in red text). I look forward to your comments.

George

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---

On May 2, 2022, at 1:01 PM, Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)> wrote:

Good Afternoon Dr. Segall,

I completed review of the summaries you provided. See below for my comments:

1. The Combined Requirements summary references supervised work experience for eluting generator systems in 10 CFR 35.290(c)(1)(ii)(G) and as written, it implies that this requirement should be completed under the supervision of an Authorized User (AU) that is not authorized for uses under 10 CFR 35.200. As it is currently listed in your summary, it states that the supervising individual must meet the requirement in 10 CFR 35.390(b).

In accordance with 10 CFR 35.290 (b), an AU under 10 CFR 35.390 must also meet the requirements in 35.290(c)(1)(ii)(G) – which is to be carried out under the supervision of an AU that meets the requirements in 10 CFR 35.57, 35.290, or 35.390 AND 35.290(c)(1)(ii)(G), or equivalent Agreement State requirements. Note that an Authorized Nuclear Pharmacist in accordance with 10 CFR 35.55 may also provide the supervised work experience for 35.290(c)(1)(ii)(G). Please clarify this section.

2. The Combined Requirements summary does not clearly state that all of the 700 hours of classroom and work experience must be applicable to the medical use of unsealed byproduct material requiring a written directive, and that the classroom and laboratory training should be a minimum of 200 hours in accordance with 10 CFR 35.390(b) (also applicable to the medical use of unsealed byproduct material requiring a written directive). Please review and clarify.

Also, similar to my comment in Item 1, note that with the way you have this section combined – with the supervised work experience requirement in 35.290(c)(1)(ii)(G) for eluting generator systems added to this section – it may not be clear that this work experience requirement (which is applicable to imaging and localization studies) must be completed under the supervision of an AU that has authorization for medical uses under 10 CFR 35.200.

I hope this helps. Let me know if you have additional questions or need further clarification.

Regards,

*Maryann*

ML22161A536



**Maryann Ayoade**

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**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>  
**Sent:** Thursday, April 28, 2022 10:47 AM  
**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>  
**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; Kirk Frey MD <[kfrey@abnm.org](mailto:kfrey@abnm.org)>; ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>  
**Subject:** [External\_Sender] Re: ABNM - Letter from U.S. NRC

Ms. Ayoade,

I've attached two summaries of NRC requirements to the an authorized user for 35.190, 35.290, and 35.390. The first summary is for physicians who complete separate training and experience for each category. The ABNM requires physicians to complete NRC required training and experience in all categories, so I combined the requirements into a single summary. Please feel free to revise the summary as needed.

The next step will be to address the ACGME training pathways, and the different entry points into the single 3-year ABNM pathway.

George

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---

On Apr 26, 2022, at 11:57 AM, Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)> wrote:

Sounds good!

Thank you!

*Maryann*

**Maryann Ayoade**  
Medical / Health Physicist

<image001.png>

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**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>  
**Sent:** Tuesday, April 26, 2022 1:43 PM  
**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>  
**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; Kirk Frey MD <[kfrey@abnm.org](mailto:kfrey@abnm.org)>; ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>; Fisher, Jennifer <[Jennifer.Fisher@nrc.gov](mailto:Jennifer.Fisher@nrc.gov)>  
**Subject:** [External\_Sender] Re: ABNM - Letter from U.S. NRC

Thank you Ms. Ayoade. I will send tomorrow a new draft of the information proposed for the ABNM website, based on the helpful information in your emails.

George Segall, MD  
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Website: <http://www.abnm.org>

---

On Apr 26, 2022, at 9:38 AM, Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)> wrote:

Hi Dr. Segall,

E-mail is fine. I can also set up another call sometime tomorrow if you prefer and are available between 11:30am – 3pm ET.

With regards, to your question, note that there are multiple pathways to become an Authorized User (AU) for medical uses under 10 CFR 35.100, 35.200, and 35.300.

1. A physician may complete all the training and experience requirements under 10 CFR 35.190, 35.290, and 35.390, which comes to a total of at least 1460 hours as you have mentioned.
2. For a physician that wants to focus on radiation safety, they may complete all the training and experience requirements under 10 CFR 35.390 (which has the most rigorous radiation safety concerns), as well as the supervised work experience requirement for eluting generator systems and using reagent kits in 10 CFR 35.290(c)(1)(ii)(G). A physician that completes the training and experience requirements in 10 CFR 35.390 can also be recognized as an AU for uses under 10 CFR 35.100. Completion of the training and experience requirements in 10 CFR 35.390 and

35.290(c)(1)(ii)(G) will allow for the physician to be an AU for 10 CFR 35.100, 200, and 300 medical uses from a radiation safety perspective.

Note that the training and experience requirements for AUs under 10 CFR 35.100, 35.200, and 35.300 focus on radiation safety for the uses for which they plan to be authorized for. An individual's status as an AU means that the individual has met the requirements to handle byproduct material safely. It does not reflect an assessment of the individual's clinical or professional competency (we do not make judgements about the clinical ability of the physician).

The regulatory requirements refer to two categories of training: (a) classroom and laboratory training, and (b) supervised work experience. All hours credited to "classroom and laboratory training" must relate directly to radiation safety and safe handling of byproduct material. The classroom and laboratory training may be obtained using a variety of instructional methods, as long it meets the specific clock hour requirements and the subject matter relates to radiation safety and safe handling of byproduct material for the uses for which authorization is being requested. The supervised work experience for physicians must include, but is not limited to, the subject areas listed in the applicable training and experience requirements. The NRC recognizes that physicians in training may not dedicate all of their supervised work experience time specifically to the subject areas listed in the regulatory requirements (i.e., 10 CFR 35.290(c)(1)(ii) and 35.390(b)(1)(ii)) and will be attending to other clinical matters involving the medical use of the material under the supervision of an AU (e.g., reviewing case histories or interpreting scans). However, those hours spent on other duties, not related to radiation safety, **should not be counted** toward the minimum number of hours of required classroom and laboratory training in radiation safety. This type of supervised work experience, may be counted toward the supervised work experience to obtain the required total hours of training (e.g., 700 hours for § 35.390). Similarly, the NRC recognizes that clinicians will not dedicate all of their time in training specifically to the subject areas described in the regulatory requirements and will be attending to other clinical matters. The NRC will broadly interpret "classroom training" to include various types of instruction received by candidates for approval, including online training, as long as the subject matter relates to radiation safety and safe handling of byproduct material. The boards for simplicity, have adopted this breakdown between classroom and laboratory and work experience.

I hope this helps!

Regards,

*Maryann*

**Maryann Ayoade**

Medical / Health Physicist

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U.S. Nuclear Regulatory Commission

[Maryann.Ayoade@nrc.gov](mailto:Maryann.Ayoade@nrc.gov) | [Teams Chat](#) |

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**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>  
**Sent:** Monday, April 25, 2022 4:33:14 PM  
**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>  
**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; Kirk Frey MD <[kfrey@abnm.org](mailto:kfrey@abnm.org)>; ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>; Fisher, Jennifer <[Jennifer.Fisher@nrc.gov](mailto:Jennifer.Fisher@nrc.gov)>  
**Subject:** [External\_Sender] Re: ABNM - Letter from U.S. NRC

Ms. Ayoade, thank you. I hope you don't mind having this discussion by email. We could have the discussion by phone, which might be faster, but the details are very important, so it is good to have the discussion by email so there is no misunderstanding.

Your last paragraph says "Also note that once an hour is counted towards classroom training, laboratory training, or supervised work experience, it cannot be used again for another category, i.e. an hour cannot be counted more than once in the total number of hours of training and experience in accordance with 10 CFR 35.190, 35.290, and 35.390."

If I understand correctly, your statement means that a physician who wants to be an authorized user for 35.190, plus 35.290, plus 35.390 must have a total of 1460 hours of training and experience, as shown in the Table.

	Classroom and laboratory	Work experience	Total hours
35.190	8	56	60
35.290	80	620	700
35.390	200	500	700
TOTAL	286	1,176	1460

Your last paragraph seems to contradict your first paragraph that says "The NRC recognizes that there may be some training hours that cover topics in both diagnostic and therapeutic uses (e.g. in imaging and localization as well as unsealed byproduct materials requiring a written directive).

I understand that NRC is "looking to see training hours in therapy". 35.390 requires 700 hours of experience, including 200 hours of classroom and laboratory training, and all of the hours must be *applicable to the use of byproduct material for which a written directive is required*. What isn't clear from your email is whether the minimum total hours for therapy plus 35.290 plus 35.190 has to be 1460 hours, as suggested by your last paragraph. (Note: It would be best if we are consistent in the terms we are using. I suggest we refer to classroom and laboratory training, work experience, and total hours.)

George

George Segall, MD  
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Website: <http://www.abnm.org>

---

On Apr 25, 2022, at 1:37 PM, Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)> wrote:

Hi Dr. Segall,

We are looking to see training hours in therapy. A residency training program in a related medical specialty should include 700 hrs of training and experience that is all be applicable to medical use of unsealed byproduct material requiring a written directive. The NRC recognizes that there may be some training hours that cover topics in both diagnostic and therapeutic uses (e.g. in imaging and localization as well as unsealed byproduct materials requiring a written directive). Note that the requirement is that all of the 700hrs of training and experience (including the supervised work experience) has to be applicable to unsealed material requiring a written directive.

Also note that once an hour is counted towards classroom training, laboratory training, or supervised work experience, it cannot be used again for another category, i.e. an hour cannot be counted more than once in the total number of hours of training and experience in accordance with 10 CFR 35.190, 35.290, and 35.390.

I hope this helps.

*Maryann*

**Maryann Ayoade**

Medical / Health Physicist  
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U.S. Nuclear Regulatory Commission  
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**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>  
**Sent:** Monday, April 25, 2022 11:50 AM  
**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>  
**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; Kirk Frey MD <[kfrey@abnm.org](mailto:kfrey@abnm.org)>; ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>; Fisher, Jennifer <[Jennifer.Fisher@nrc.gov](mailto:Jennifer.Fisher@nrc.gov)>  
**Subject:** [External\_Sender] Re: ABNM - Letter from U.S. NRC

Ms. Ayoade,

Thank you for the additional helpful information. I have a question about 2.B. in your email:

Successfully complete residency training in a radiation therapy or nuclear medicine training program or a program (that is approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education, the Royal College of Physicians and

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Surgeons of Canada, or the Council on Postdoctoral Training of the American Osteopathic Association) in a related medical specialty during which they will complete 700 hours of training and experience as described in 10 CFR 35.390(b)(1)(i) through (b)(1)(ii)(E);

Would Diagnostic Radiology training, and Nuclear Radiology training, which are both ACGME approved training programs, as well as Nuclear Medicine training in Canada, which is approved by the RCPSC, be considered related medical specialties?

George

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On Apr 25, 2022, at 9:16 AM, Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)> wrote:

Good morning Dr. Segall,

Please see below for my comments on your draft letter.

1. The section of your draft response letter on the NRC's training and experience requirements only references requirements for 10 CFR 35.390 training, and does not specify that **all the training and work experience hours must be applicable to the medical use of unsealed byproduct material requiring a written directive**. Note that the ABNM's recognition is for its certification process that meets the NRC's training and experience requirements in 10 CFR 35.190, 35.290, and 35.390. Please update your response and website to include these training requirements and clarify the type of use that each training section is applicable to.
2. Clarify on your website and your Program Director's Evaluation of Clinical Competence Form that all your candidates will:
  - a. Complete the training and experience requirements in 10 CFR 35.190(a) and 35.290(a) – which includes the hours of training and supervised work experience (60 hours for 10 CFR 35.100 and 700 hours for 10 CFR 35.200) all applicable to the uses in 35.100 and 35.200; and pass the required examination;
  - b. Successfully complete residency training in a radiation therapy or nuclear medicine training program or a program (that is approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education, the Royal College of Physicians and Surgeons of Canada, or the Council on Postdoctoral Training of the American Osteopathic Association) in a related medical specialty during which they will complete 700 hours of training and experience as described in 10 CFR 35.390(b)(1)(i) through (b)(1)(ii)(E);

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- c. Pass an examination, administered by diplomates of the specialty board, which tests knowledge and competence in radiation safety, radionuclide handling, quality assurance, and clinical use of unsealed byproduct material for which a written directive is required; and
  - d. Meet the training and supervised work experience requirements in 10 CFR 35.390(b)(1)(ii)(G).
3. Note that the ABR's certification process for their Nuclear Radiology program is currently not one that is recognized by the NRC. Please review your website and clarify accordingly.
  4. Note that the requirement in 10 CFR 35.390(b)(1)(ii)(G)(3) that is referenced in Section 2B of your Program Director's Evaluation of Clinical Competence Form references a requirement that was revised in the last Part 35 revision issued on July 16, 2018 (Final Rule "Medical Use of Byproduct Material—Medical Event Definitions, Training and Experience, and Clarifying Amendments." [83 FR 33046](#)). This requirement states:
    - *(3) Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its electron emission, beta radiation characteristics, alpha radiation characteristics, or photon energy of less than 150 keV, for which a written directive is required; and*

Please review this section and other sections of your website and applicable documentation, and revise accordingly.

I hope this helps. Let me know if you have any additional questions.

Regards,

*Maryann*

<p><b>Maryann Ayoade</b>          Medical / Health Physicist          Division of Materials Safety, Security,          State, and Tribal Programs          Office of Nuclear Material Safety and Safeguards          U.S. Nuclear Regulatory Commission  <a href="mailto:Maryann.Ayoade@nrc.gov">Maryann.Ayoade@nrc.gov</a>   <a href="#">Teams Chat</a>            301-415-0862</p>		<p><b>MSST Vision:</b>          Active partnership and          trustworthy leadership for...          safety and security,          engaged people,          reliable relationships, and          smart regulatory solutions</p>
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**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>  
**Sent:** Thursday, April 21, 2022 3:59 PM  
**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>  
**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; Kirk Frey MD <[kfrey@abnm.org](mailto:kfrey@abnm.org)>; ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>; Fisher, Jennifer <[Jennifer.Fisher@nrc.gov](mailto:Jennifer.Fisher@nrc.gov)>  
**Subject:** [External\_Sender] Re: ABNM - Letter from U.S. NRC

Ms. Ayoade,

I drafted a letter to clarify ABNM policy on NRC training requirements to be an Authorized User, with suggested changes to the ABNM website. Please review the attached draft letter, and let me know if you have any questions, comments, or suggestions.

Thank you,

George Segall, MD  
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American Board of Nuclear Medicine  
1030 Highlands Plaza Drive - 511E  
St. Louis MO 63110

Office: 314 367-2225

Email: [abnm@abnm.org](mailto:abnm@abnm.org)

Website: <http://www.abnm.org>

---

**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>

**Sent:** Thursday, April 21, 2022 12:25 PM

**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>

**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>; Fisher, Jennifer <[Jennifer.Fisher@nrc.gov](mailto:Jennifer.Fisher@nrc.gov)>

**Subject:** [External\_Sender] Re: ABNM - Letter from U.S. NRC

Ms. Ayoade,

Thank you for the helpful information you provided during the phone call this morning. The ABNM should be able to respond tomorrow.

George Segall, MD  
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Office: 314 367-2225

Email: [abnm@abnm.org](mailto:abnm@abnm.org)

Website: <http://www.abnm.org>



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On Apr 21, 2022, at 9:38 AM, Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)> wrote:

Hi Dr. Segall,

ML22161A536



Thank you again for providing clarification on how the ABNM continues to meet NRC's requirements during our phone call earlier today. When can we expect to get the response?

Regards,

*Maryann*

**Maryann Ayoade**

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[Maryann.Ayoade@nrc.gov](mailto:Maryann.Ayoade@nrc.gov) | [Teams Chat](#) |  
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<image002.png>

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**NOTES FROM MEETING WITH ABNM on April 21, 2022**

**Telephone Meeting on April 21, 2022 @11am ET**

- Terms used on website is different from what we saw in 2005 submission and what was recognized in that October 20, 2005 letter.
- We assumed that there are different NM related residency programs (1yr, 2yr, 3yr), and not what we see now that looks like 16 months and 2yr and 3 yrs of a 4yr NM program.
- Then also see the same for the part for folks with DR training.
- 10 CFR 35.290?
- NEVER changed their requirements from 2005.

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**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>

**Sent:** Wednesday, April 20, 2022 11:22 PM

**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>

**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>; Fisher, Jennifer <[Jennifer.Fisher@nrc.gov](mailto:Jennifer.Fisher@nrc.gov)>

**Subject:** [External\_Sender] Re: ABNM - Letter from U.S. NRC

Thank you.

George Segall, MD  
Executive Director  
[American Board of Nuclear Medicine](#)  
1030 Highlands Plaza Drive - 511E  
St. Louis MO 63110

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Email: [abnm@abnm.org](mailto:abnm@abnm.org)

Website: <http://www.abnm.org>

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On Apr 20, 2022, at 3:02 PM, Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)> wrote:

Hi Dr. Segall,

ML22161A536

I just sent a Microsoft Teams meeting scheduler for tomorrow morning (10am CT), and I included Maria as well. I look forward to discussing with you both tomorrow.

Regards,

*Maryann*

**Maryann Ayoade**

Medical / Health Physicist

Division of Materials Safety, Security,  
State, and Tribal Programs

Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission

[Maryann.Ayoade@nrc.gov](mailto:Maryann.Ayoade@nrc.gov) | [Teams Chat](#) |

301-415-0862

<image001.png>

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trustworthy leadership for...  
safety and security,  
engaged people,  
reliable relationships, and  
smart regulatory solutions

---

**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>

**Sent:** Wednesday, April 20, 2022 11:44 AM

**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>

**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>; Fisher, Jennifer <[Jennifer.Fisher@nrc.gov](mailto:Jennifer.Fisher@nrc.gov)>

**Subject:** [External\_Sender] Re: ABNM - Letter from U.S. NRC

I agree it would be best to have Maria included on the call. She is the ABNM Administrator, and responsible for implementing ABNM policies.

George Segall, MD

Executive Director

[American Board of Nuclear Medicine](#)

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Office: 314 367-2225

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Website: <http://www.abnm.org>



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On Apr 20, 2022, at 9:40 AM, Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)> wrote:

Maryann,

If possible, I would like to be included in on this call.

Thank you,

Maria

ML22161A536

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**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>  
**Sent:** Wednesday, April 20, 2022 11:38 AM  
**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>  
**Cc:** ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>; Fisher, Jennifer <[Jennifer.Fisher@nrc.gov](mailto:Jennifer.Fisher@nrc.gov)>; Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>  
**Subject:** Re: ABNM - Letter from U.S. NRC

Yes, I am available during the time you suggested on Thursday. Since I am in the Pacific Time Zone, 10 a.m. CT would be best for me. Either phone or internet video application is fine. If you prefer phone, let me know the number to call. If you prefer a video conference, please send the information.

George Segall, MD  
Executive Director  
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St. Louis MO 63110

Office: 314 367-2225  
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Website: <http://www.abnm.org>

---

On Apr 20, 2022, at 9:28 AM, Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)> wrote:

Good Afternoon Dr. Segall,

Thank you responding. I would like to discuss the requirements you have listed on the ABNM webpage for Training Requirements for the ABNM Certifying Examination (<https://www.abnm.org/exam/training-requirements/>). Are you available for a phone call tomorrow for a few minutes (sometime between 9am – 12pm central time)?

Regards,

*Maryann*

**Maryann Ayoade**

Medical / Health Physicist  
Division of Materials Safety, Security,  
State, and Tribal Programs  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
[Maryann.Ayoade@nrc.gov](mailto:Maryann.Ayoade@nrc.gov) | [Teams Chat](#) |  
301-415-0862

<image002.png>

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ML22161A536

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**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>  
**Sent:** Wednesday, April 20, 2022 10:59 AM  
**To:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>  
**Cc:** ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>; Fisher, Jennifer <[Jennifer.Fisher@nrc.gov](mailto:Jennifer.Fisher@nrc.gov)>; Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>  
**Subject:** [External\_Sender] Re: ABNM - Letter from U.S. NRC

Ms. Ayoade,

The ABNM has continued to require its diplomates have the training and experience required by the NRC to be an authorized user for 10 CFR 35.190, 10 CFR 35.290, and 10 CFR 35.390. All of the commitments and assurances made in the ABNM letter dated October 20, 2005 necessary to receive NRC recognition have been ABNM policy without interruption since the letter was written.

George Segall, MD  
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---

On Apr 20, 2022, at 7:47 AM, Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)> wrote:  
Good Morning Dr. Segall,

Thank you for submitting the requested information to the NRC. A review of the ABNM website shows that the ABNM appears to have made changes to its certification process for the Nuclear Medicine specialty area that is different from what was originally recognized by the NRC on October 21, 2005 (based on ABNM letter dated October 20, 2005), and does not appear to meet the NRC requirements for continued recognition. The section on your website titled "Training Requirement for the ABNM Certifying Examination" (<https://www.abnm.org/exam/training-requirements/>) also indicates that these requirements were approved on February 17, 2015.

In order to maintain your recognition, please clarify the dates that ABNM made changes to its certification process since its NRC recognition in October 2005.

- Note that any changes made between October 20, 2005 and February 17, 2015 may affect the NRC's ability to recognize ABNM's certification processes and recognize any diplomates certified by ABNM between 2005 and 2015.
- Additionally, note that any changes made in February 2015 may also affect the NRC's ability to recognize ABNM's certification processes and any diplomates certified between 2015 and present.

ML22161A536

Regards,

*Maryann*

**Maryann Ayoade**

Medical / Health Physicist  
Division of Materials Safety, Security,  
State, and Tribal Programs  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
[Maryann.Ayoade@nrc.gov](mailto:Maryann.Ayoade@nrc.gov) | [Teams Chat](#) |  
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<image003.png>

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---

**From:** Fisher, Jennifer <Jennifer.Fisher@nrc.gov>  
**Sent:** Thursday, April 14, 2022 3:27 PM  
**To:** Maria Watts <mwatts@abnm.org>  
**Cc:** Ayoade, Maryann <maryann.ayoade@nrc.gov>  
**Subject:** RE: RE: ABNM - Letter from U.S. NRC

Thank you Maria.

Jenny Fisher  
Medical Safety and Events Assessment Branch  
Division of Materials Safety, Security, State, and  
Tribal Programs  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
[Jennifer.Fisher@nrc.gov](mailto:Jennifer.Fisher@nrc.gov) (she/hers) 301-415-1456

---

**From:** Maria Watts <mwatts@abnm.org>  
**Sent:** Thursday, April 14, 2022 2:51 PM  
**To:** Fisher, Jennifer <[Jennifer.Fisher@nrc.gov](mailto:Jennifer.Fisher@nrc.gov)>; Ayoade, Maryann  
<[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>  
**Cc:** Monica Frye <[mfrye@abnm.org](mailto:mfrye@abnm.org)>; [kfrey@abnm.org](mailto:kfrey@abnm.org); George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>;  
ABNM <[abnm@abnm.org](mailto:abnm@abnm.org)>  
**Subject:** [External\_Sender] RE: ABNM - Letter from U.S. NRC

Jennifer,  
Attached please find the confirmation letter stating that the ABNM continues to satisfy the U.S. Nuclear Regulatory Commission (NRC) recognition criteria for specialty board certification processes.  
Additionally, please find the draft letter dated October 20, 2005, requested by Maryann Ayoade as accompaniment to this email.

Regards,  
Maria

ML22161A536

**Maria Watts, MBA**  
Administrator



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ATTACHMENTS:

1. [ML22105A576](#) - Response Letter, American Board of Nuclear Medicine, Continues to Satisfy the NRC Recognition Criteria for Specialty Board Certification Process
  2. [ML102240030](#) - ABNM Certificate
  3. [ML22105A577](#) - [American Board of Nuclear Medicine Letter to NRC on October 20, 2005](#)
- 

**From:** George Segall <[gsegall@abnm.org](mailto:gsegall@abnm.org)>

**Sent:** Wednesday, March 16, 2022 2:45 PM

**To:** [Jennifer.Fisher@nrc.gov](mailto:Jennifer.Fisher@nrc.gov)

**Cc:** Maria Watts <[mwatts@abnm.org](mailto:mwatts@abnm.org)>; Monica Frye <[mfrye@abnm.org](mailto:mfrye@abnm.org)>; [kfrey@abnm.org](mailto:kfrey@abnm.org)

**Subject:** Re: ABNM - Letter from U.S. NRC

Ms. Fisher,

I am acknowledging receipt of your email and attachments.

The American Board of Nuclear Medicine will send you a confirmation letter that the Board continues to satisfy the U.S. Nuclear Regulatory Commission (NRC) recognition criteria for specialty board certification processes.

Sincerely,

George Segall, MD  
Executive Director  
[American Board of Nuclear Medicine](http://www.abnm.org)  
1030 Highlands Plaza Drive - 511E  
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ML22161A536

Office: 314 367-2225  
Email: [abnm@abnm.org](mailto:abnm@abnm.org)  
Website: <http://www.abnm.org>



**From:** Fisher, Jennifer <[Jennifer.Fisher@nrc.gov](mailto:Jennifer.Fisher@nrc.gov)>  
**Sent:** Tuesday, March 15, 2022 7:40 PM  
**To:** [ABNM@ABNM.org](mailto:ABNM@ABNM.org)  
**Cc:** Ayoade, Maryann <[maryann.ayoade@nrc.gov](mailto:maryann.ayoade@nrc.gov)>  
**Subject:** ABNM - Letter from U.S. NRC

Dear Dr. Segall,

Please see the attached letter and enclosure.

Thanks,

**Jenny Fisher**

Medical Safety and Events Assessment Branch  
Division of Materials Safety, Security, State, and  
Tribal Programs  
Office of Nuclear Material Safety and  
Safeguards  
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<image001.png>

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and security,  
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reliable relationships,  
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solutions

**ATTACHMENT:**

1. [ML102240030](#) - ABNM Certificate
2. [ML22069A712](#) - American Board of Nuclear Medicine, Review of Specialty Board Continued Recognition by the NRC