



**American Association of Physicists in Medicine**

*Office of the President*  
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Dr. Donald A. Cool  
Director,  
Division of Industrial and  
Medical Nuclear Safety  
U.S. NRC  
Two White Flint North  
11545 Rockville Pike,  
Mail Stop T8F5  
Rockville, MD 20852-2738

Dear Dr. Cool:

Please find enclosed a statement that addresses the American Association of Physicists in Medicine's (AAPM) concerns about the interpretation of the new Part 35, as it pertains to Authorized Medical Physicists. The AAPM strongly believes that board certification is essential to becoming a Qualified Medical Physicist and should not be diminished, as you implement new training and experience guidelines.

Sincerely,

Charles W. Coffey, II  
President

## Authorized Medical Physicists under the New Part 35 – Proposal from the American Association of Physicists in Medicine

### Introduction

A strict interpretation of the new Part 35 would diminish the importance of board certification for medical physicists, as board certification alone would not be a sufficient justification for the U.S. Nuclear Regulatory Commission (NRC) to certify an individual as an Authorized Medical Physicist (AMP). This is based upon the assumption that the American Board of Radiology (ABR), which will soon be the only board offering certification in radiation oncology physics, will not require candidates to have explicit experience with Co-60 units and high dose rate remote afterloading units and gamma stereotactic units. In recognizing Board certification as a pathway for certifying an individual as an AMP, the NRC expects that the ABR certification process include all of the training and experience requirements in paragraph (b) of 35.51. The training and experience requirements include a graduate degree and completion of one year full time training in therapeutic radiological physics and an additional year of full time practical experience under the supervision of a medical physicist at a medical institution that includes the tasks listed in:

- 35.67 Requirements for possession of sealed sources and brachytherapy sources
- 35.632 Full calibration measurements on teletherapy units
- 35.633 Full calibration measurements on remote afterloader units
- 36.635 Full calibration measurements on gamma stereotactic radiosurgery units
- 35.642 Periodic spot checks for teletherapy units
- 35.643 Periodic spot checks for remote afterloader units
- 35.645 Periodic spot-checks for gamma stereotactic radiosurgery units
- 35.652 Radiation Surveys

It is expected that physicists, who are currently covered by NRC licenses, would be grandfathered to become AMP's. However, it is not clear how the NRC will handle the situation where a physicist is authorized for HDR, but whose name is not on a teletherapy license or a gamma stereotactic license. It is expected that new physicists would have to meet the above requirements. Under a strict interpretation, board certification would assume secondary importance, as medical physicists would focus on meeting these new regulatory training and experience requirements.

The NRC is focused on implementing this new rule and is not interested in considering changes to it. It is possible to petition for new rule making, but that would take 1.5 to 2 years to accomplish.

There is a consensus definition of a qualified medical physicist (QMP), namely a physicist who is board certified and who meets continuing education requirements. This certainly represents an industry standard for a QMP. The American Association of Physicists in Medicine, the American College of Medical Physics, and the American College of Radiology have adopted this concept. (There are minor differences in the exact statement of the various organizations.)

### Possible Solutions

The AAPM requests that the NRC define at least three sub-categories of AMP, namely, teletherapy AMP, remote afterloading AMP, and gamma stereotactic AMP.

The AAPM requests that the NRC clarify the situation with respect to physicists who are currently named on licenses for one or two of these categories, but not all three categories.

The AAPM proposes the following criteria for use by NRC staff to evaluate applications from medical physicists to be named Authorized Medical Physicists.

#### **Teletherapy AMP**

Board certified physicist

One independent calibration of a Co-60 teletherapy unit and one independent monthly spot check. Calibration and spot check to be signed off on by a teletherapy AMP

OR

A graduate degree and completion of one year full time training in therapeutic radiological physics and an additional year of full time practical experience under the supervision of a medical physicist at a medical institution uses a Co-60 teletherapy unit

Non-board certified physicist

A graduate degree and completion of one year full time training in therapeutic radiological physics and an additional year of full time practical experience under the supervision of a medical physicist at a medical institution uses a Co-60 teletherapy unit

#### **Remote Afterloading AMP**

Board certified physicist

One independent calibration of a remote afterloading unit and one independent monthly spot check. Calibration and spot check to be signed off on by a remote afterloading AMP.

OR

A graduate degree and completion of one year full time training in therapeutic radiological physics and an additional year of full time practical experience under the supervision of a medical physicist at a medical institution uses a remote afterloading unit

Non-board certified physicist

A graduate degree and completion of one year full time training in therapeutic radiological physics and an additional year of full time practical experience under the supervision of a medical physicist at a medical institution uses a remote afterloading unit

**Gamma stereotactic AMP**

Board certified physicist

One independent calibration of a gamma stereotactic unit and one independent monthly spot check. Calibration and spot check to be signed off on by a gamma stereotactic AMP.

OR

A graduate degree and completion of one year full time training in therapeutic radiological physics and an additional year of full time practical experience under the supervision of a medical physicist at a medical institution uses a gamma stereotactic unit

Non-board certified physicist

A graduate degree and completion of one year full time training in therapeutic radiological physics and an additional year of full time practical experience under the supervision of a medical physicist at a medical institution uses a gamma stereotactic unit

The justification for only one independent calibration and spot check for a board certified physicist is that board certification is a judgment by peers that a physicist has demonstrated minimum standards in his/her sub-specialty area and that a peer reviewed demonstration that the individual has understood the details associated with calibration or spot checks for that device. The board certified medical physicist could avoid the efforts of a peer reviewed calibration and spot check by meeting the same education and training requirements of the non-board certified physicist. The requirements for the non-board certified physicist are those found in Part 35.