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AMERICAN ASSOCIATION
of PHYSICISTS IN MEDICINE

June 26, 2017

Patrick McDonnell
Acting Chairperson
Environmental Quality Board
Rachel Carson State Office Building, 16th Floor
400 Market Street
Harrisburg, PA 17101-2301

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IRRC

VIA E-Mail: RegComments@pa.gov

Re: Proposed Rulemaking, Environmental Quality Board [25 PA. Code Chs. 215-221, 225, 227, 228, 230 and 240] Radiological Health

Dear Mr. McDonnell:

The American Association of Physicists in Medicine (AAPM)¹ is pleased to submit comments to the Pennsylvania Environmental Quality Board (PA EQB) regarding the proposed rules that would update and amend Article V radiological health regulations establishing and maintaining adequate radiation protection standards and oversight. The AAPM commends the PA EQB on its work in developing these proposed regulations, including requirements for facilities, equipment, staffing, operation and maintenance, records, and reporting requirements, intended to reduce radiation exposure to the public and to help prevent incidents of overexposure to patients and staff. The AAPM, however, has the following specific comments:

¹ The American Association of Physicists in Medicine (AAPM) is the premier organization in medical physics, a broadly-based scientific and professional discipline encompassing physics principles and applications in biology and medicine whose mission is to advance the science, education and professional practice of medical physics. Medical physicists contribute to the effectiveness of radiological imaging procedures by assuring radiation safety and helping to develop improved imaging techniques (e.g., mammography, CT, MR, Ultrasound). They contribute to development of therapeutic techniques (e.g., prostate implants, stereotactic radiosurgery), collaborate with radiation oncologists to design treatment plans, and monitor equipment and procedures to insure that cancer patients receive the prescribed dose of radiation to the correct location. Medical physicists are responsible for ensuring that imaging and treatment facilities meet the rules and regulations of the U.S. Nuclear Regulatory Commission (NRC) and various state regulatory agencies. AAPM represents over 8,500 medical physicists.

1. Definition of QMP

As currently proposed in Chapter 221 §221.2, the definition of *Qualified Medical Physicist* provides three alternative pathways to be considered a “Qualified Medical Physicist.” The AAPM believes that the pathways as proposed are insufficient to assure that individuals providing the designated medical physics services are qualified to do so. This is especially true given the complexity of modern X-ray equipment, including computed tomography (CT). The AAPM recommends that PA EQB consider adopting AAPM’s definition as stated in AAPM’s Professional Policy Statement² or the definition of Qualified Medical Physicist from the Conference of Radiation Control Program Directors Suggested State Regulations for Control of Radiation (CRCPD SSRCR), Part F, Sec. F.2, p.11³:

"Qualified medical physicist (QMP)" means an individual who meets each of the following credentials:

- 1. Has earned a master's and/or doctoral degree in physics, medical physics, biophysics, radiological physics, medical health physics, or equivalent disciplines from an accredited college or university; and*
- 2. Has been granted certification in the specific subfield(s) of medical physics with its associated medical health physics aspects by an appropriate national certifying body and abides by the certifying body's requirements for continuing education;*

The AAPM is particularly concerned by the alternate pathways to QMP status presented in paragraphs ii and iii of the Chapter 221, §221.2 Definition of QMP. Paragraph ii provides as follows:

(ii) An individual who does not meet the requirements of subparagraph (i) shall meet each of the following credentials to qualify as a QMP:

² AAPM Professional Policy 1, *Definition of a Qualified Medical Physicist*; link: <http://www.aapm.org/org/policies/details.asp?id=316&type=PP>.

³ CRCPD SSRCR Part F, Sec. F.2: http://www.crcpd.org/SSRCRs/Fpart_2015.pdf

(A) Has earned a master's or doctoral degree, or both, in physics, medical physics, biophysics, radiological physics, health physics or equivalent disciplines from an accredited college or university.

(B) Has 3 years of documented relevant clinical training and experience in each of the subfields in the definition of "medical physics," under the supervision of a QMP who is qualified to practice in the same subfield, for each of the areas in which the individual intends to practice.

(C) Completes the continuing education requirements of an applicable certifying body of health/radiological physics or in one or more of the subfields of medical physics in which the individual practices.

This pathway allows an individual to practice as a QMP without obtaining a board certification or working through an accredited residency program. We do not believe that working under the supervision of a QMP for three years provides the equivalent of education and training represented by board certification. Moreover, there are great variations in practice environments that may limit the structure, consistency and sufficiency of on-the-job training received under the supervision of a QMP for three years.

The AAPM recommends designating individuals who meet the education and training requirements stated in this paragraph as “Qualified Experts (QEs)” rather than as QMPs. The CRCPD SSRCR, Part F, Sec. F.2, p.11⁴ provides the following definition for qualified expert:

“Qualified Expert (QE)” means an individual who is granted professional privileges based on education and experience to provide clinical services in diagnostic medical physics by the Agency.

This designation would allow the QE to provide clinical services as specified by the PA EQB. Provision of some clinical services should be limited to only QMPs—i.e., those individuals with board certification. The AAPM believes adopting this additional designation would

⁴ *Id.* at 11.

give greater clarity to the definition of QMP and recognize the considerable achievement represented by board certification.

Paragraph iii of the proposed regulation provides as follows:

(iii) An individual who has been practicing as a QMP in health/radiological physics or in one or more of subfields of medical physics for at least 5 years prior to _____, (Editor's Note: The blank refers to the effective date of adoption of this proposed rulemaking.) is exempt from the requirements of subparagraphs (i) and (ii). Documentation of at least 5 years of practicing as a QMP in health/radiological physics or in one or more of the subfields of medical physics must be maintained for each of the fields or subfields, or both, in which the individual practices. As of _____, (Editor's Note: The blank refers to the effective date of adoption of this proposed rulemaking.) an individual who qualifies as a QMP under this subparagraph shall meet the continuing education requirements in subparagraph (ii)(C).

Again, we are concerned that this alternate pathway allows an individual to practice as a QMP without board certification. We believe that this requirement should not be side-stepped, and we recommend that individuals meeting the requirements of paragraph iii also be designated as QEs. This designation would allow those individuals who are currently providing clinical services to continue to serve in their current roles, without any disruption caused by rule implementation.

The AAPM believes, however, that for the benefit of patient, worker and general public safety it is essential that QMP be uniformly defined. The certification requirement and the training and experience necessary to obtain and maintain board certification serve to improve patient safety by ensuring only qualified individuals perform essential services within the scope of clinical medical physics practice. Accordingly, this distinction should be recognized by limiting the QMP designation to only those who are board certified.

In summary, the AAPM strongly urges the PA EQB to adopt the Conference of Radiation Control Program Directors (CRCPD) Suggested State Regulations for Control of Radiation (SSRCR), Part F definition of Qualified Medical Physicist. The AAPM hopes that PA EQB will

consider AAPM's recommendations when formulating the final radiological health rule.
Should PA EQB staff have any questions, please contact Richard J. Martin, J.D., at (571) 298-1227 or richard@aapm.org.

Sincerely,



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