

candidate to have an academic degree, complete practical experience or a residency program, and pass an examination. Examinations test the knowledge and skills required to perform the applicable activities, including those in proposed §§ 35.490(a)(2) and 35.690(a)(2), to ensure radiation safety. The NRC believes that the combination of a degree, practical experience and an examination in the proposed criteria for recognizing certifying boards would be equivalent to the number of hours of didactic training and experience specified for the alternate pathway. Further, the proposed requirement in the certification pathway for §§ 35.390, 35.490 and 35.690 for completion of an approved, 3-year residency program provides added assurance that T&E is sufficient.

The ACMUI's recommendations included the addition of the Royal College of Physicians and Surgeons of Canada (RCPSC) in listings of entities which approve residency training to satisfy requirements for the board certification pathway for uses under §§ 35.300, 35.400, and 35.600. While the RCPSC was named in subpart J of the current rule, it is not named in other subparts. There are reciprocal arrangements between U.S. entities and the RCPSC regarding approval of residency programs. Thus, the NRC finds these reciprocal agreements to be a sufficient basis to provide that RCPSC be included in various sections of 10 CFR part 35, as previously discussed.

The proposed rule would provide the boards more latitude in making the determination that individuals are fully trained and capable of performing their duties involving radiation safety. These proposed changes to the certification pathway would continue to ensure the safe use of byproduct material by medical licensees by establishing criteria for specialty boards to use in granting certifications. The NRC made a determination that, with the exception of one specialty board, the boards do not meet the requirement in the current rule regarding preceptor certification and work experience. The proposed revisions for the certification pathway would remedy the problem of boards not meeting current requirements in 10 CFR part 35.

Changes to the Alternate Pathway

The proposed rule also contains revised requirements for some of the alternate pathways. Most of these changes are minor and would clarify the requirements for training and experience.

The ACMUI's recommendations for approval as an AU in the alternate pathway in §§ 35.490(b) and 35.690(b) include the addition of the RCPSC to the listings of organizations that approve residency programs. The NRC finds that RCPSC should be included in the listing for the reasons previously discussed above under the heading, "*Changes to the Certification Pathway.*"

Training Specific to Type of Use

The ACMUI recommended that, in addition to meeting minimum training and experience requirements, authorized individuals should have training or experience in the use of byproduct material or specific modalities (types of use), as appropriate, for which a licensee is authorized. The requirement would also apply to newly hired authorized individuals and when a new type of use is added to the licensee's program. The NRC supports these changes, believing that they would ensure that a licensee's staff has adequate knowledge and experience to fulfill the duties for which they are responsible. The proposed rule includes new paragraphs that add this requirement in § 35.50(e) for RSOs, § 35.51(d) for AMPs and for AUs in § 35.690(d) for remote afterloader, teletherapy and gamma stereotactic radiosurgery units. For uses under § 35.300, requirements in § 35.390(b)(1) provide for training specific to type of use which applies to both the board certification and alternate pathways.

Other Changes

In the current rule, § 35.390(b)(1) specifies that work experience for uses of byproduct material in unsealed form for which a written directive is required must include administering dosages of radioactive drugs involving a minimum of three cases in each of the categories for which the individual is requesting authorized user status. Sections 35.390(b)(1)(ii)(G)(3) and (4) refer to parenteral administration of certain radionuclides. The proposed rule would clarify that this training must be with quantities of radionuclides for which a written directive is required. The NRC supports these changes because, without them, an individual might cite experience with low-level dosages to satisfy requirements for work experience; the changes place emphasis on the need for AUs to have work experience with higher level dosages, for which a written directive is required.

The ACMUI recommended that the requirements for work experience for authorized users in §§ 35.190, 35.290, and 35.390 be changed to require experience with performing quality

control check of instruments rather than with calibrating instruments. The proposed rule would effect these recommendations with changes to §§ 35.190(c)(1)(ii)(B), 35.290(c)(1)(ii)(B), 35.390(b)(1)(ii)(B), 35.392(c)(2)(ii), and 35.394(c)(2)(ii). The NRC agrees with this recommendation because ensuring proper function of these instruments involves more than periodic calibration. In addition to instrument calibration, quality control procedures commonly include checks of such parameters as linearity, constancy and functionality (including battery checks).

Training requirements for authorizations as a medical physicist would be changed in § 35.51(b)(1) to remove specific requirements for a degree in biophysics, radiological physics, and health physics, and add the more general, other physical sciences, as well as engineering and applied mathematics. The requirement for 1 year of full-time training in therapeutic radiological physics would be changed to a more general requirement for 1 year of full-time training in medical physics. Similarly, the requirement for training in a clinical radiation oncology facility would be changed to a requirement for training in "clinical radiation facilities." Pluralizing "facility" makes it possible for candidates to receive training in more than one institution. In § 35.690(b)(2), the requirement for candidates to be approved as AUs would be changed to broaden the requirement that supervised clinical experience be received in "radiation therapy" rather than in "radiation oncology." These changes are needed to allow for the therapeutic use of byproduct material in applications other than cancer therapy and allowing for T&E to be obtained in more than one facility.

Current regulations in § 35.50(c) provide that an AMP identified on a licensee's license can serve as an RSO, provided that the individual has experience with the radiation safety aspects of similar types of use of byproduct material for which the individual has responsibilities as an RSO. However, current regulations only require services of an AMP for uses under §§ 35.433 and 35.600; a few AMPs are also named on licenses for uses under § 35.1000. Therefore, individuals who may have adequate T&E to serve as AMPs for types of use licensed under §§ 35.100, 35.200, 35.300, 35.400 and 35.500, are not listed on an NRC or Agreement State license under current rules. Medical physicists who are certified by a specialty board recognized by the Commission or an