

**Information Notice Number 4
(revised January 2022)**

For Florida Radiation Machine Registrants

Department of Health, Bureau of Radiation Control

DOSE WEIGHTING FACTORS

Rule 64E-5.101 (159), Florida Administrative Code (FAC) provide that a weighting factor (W_T) of 1 be used when including a whole body external radiation field in the calculation of effective dose. Rule 64E-5.101 (159), FAC, also permits the department to consider an alternative weighting factor or a dose correction factor for the external exposure.

When using personnel use protective aprons or other personal protective radiation barriers, the measured dose value for the unattenuated external radiation field may be overly conservative and lead to an unessentially conservative dose determination. A correction to the effective dose may be adopted under this scenario.

To apply a dose correction, the registrant must request in writing to this office at the address below. The request must include the following information:

- A. A demonstration how a correction to the dose from an external radiation field is appropriate for determining the effective dose to an individual.
- B. A description of the personnel subject to dose correction. The description may be specific or generalized as long as personnel and representatives of the department are able to clearly identify to whom the dose correction applies. For example, it may be as general as all medical personnel that perform certain procedures or that work in a specific unit or the description may be specific to individuals or a specific position.
- C. The dose correction, its method of use and the calculation for determining the effective dose.
 - 1. The method and procedures for dose correction, the effective dose calculation and constant numerical values used for dose correction (dose correction factors) must be from a nationally or internationally published peer reviewed source; and
 - 2. The method and procedures for dose correction, the effective dose calculation and dose correction factors must be accepted by or endorsed by a national or international radiation protection standards setting body or a national or international consensus body related to radiation protection or use of radiation in medicine.

Examples: National Council on Radiation Protection & Measurements, The American Association of Physicists in Medicine, American College of Radiology, International Commission on Radiological Protection, International Atomic Energy Agency.

- D. The date the dose correction method will be implemented. A dose correction method cannot be applied retroactively to effective dose evaluations prior to the dose correction adoption or implementation date.
- E. A statement that personnel who have their effective doses calculated using a dose correction will be informed annually of the unweighted dosimeter measurements and the process used to determine their dose of record as required by rule 6E-5.903, FAC.

- F. The method for determining effective dose for individuals who do not use protective aprons or other personal protective radiation barriers during the entire monitoring period.

Registrants must receive written approval of their request prior to adopting the alternate weighting factors. Both the written request and the approval letter should be available for review by the department during their facility inspections. The method for dose correction shall become part of the registrants radiation protection program (RPP) and reviewed as part of the annual RPP review process. Any revisions to the method and procedures for dose correction, the effective dose calculation and dose correction factors must be submitted to the department for approval.

When summing doses reports to determine compliance with occupational dose limits under rule 64E-5.304, FAC, for an individual working at multiple facilities, all official determinations of dose are to be treated equally. For example, assume a physician works in two separate interventional medical facilities. This physician is performing the same procedures under the same radiation protection programs, except that one facility has adopted a correction to external field dose values and one has not. The cumulative annual exposure for determining compliance with the regulatory dose limits is the sum of the two official dose values, one with a correction factor and one without.

Registrants who have already adopted a method for correcting exposure to external radiation fields and unable to find a copy of their approval letter should resubmit their request according to this Information Notice to obtain an updated approval letter. If you have questions or need guidance, please contact this office at:

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