

APPENDIX M

Procedures for Conducting a Member of the Public Dose Compliance Study

If licensed for, or seeking licensure for possession and use of radioactive material, in accordance with section 64E-5.313, Florida Administrative Code (F.A.C), the radiation hazard resulting from licensed operations must be evaluated to demonstrate compliance with the member of public (MOP) dose limits described in section 64E-5.312, F.A.C. Be advised, the dose in any unrestricted area from external sources must be less than 2 mr/hr.

Use steps 1, 2 and 3 to calculate Total Effective Dose Equivalent (TEDE) and keep calculations on file for inspection purposes.

1. Deep Dose Equivalent (DDE): External Exposure from Sealed Sources

Calculate DDE value for dose from external whole body radiation exposure; **DDE = TEDE**

Note: To demonstrate compliance with the annual MOP dose limit specified in 64E-5.312(1)(a), the TEDE must be \leq 100 mrem.

Select one of the following methods:

Occupational Worker Dosimetry Data

(The highest individual cumulative external dose for the 12 month monitoring period.)

Dosimetry Data for the Maximally Exposed Individual MOP

(The highest individual cumulative external dose for the 12 month monitoring period where the MOP's workstation is located.)

Environmental Monitoring Data

(Enter the TLD highest cumulative dose for the 12 month monitoring period, based on continuous year-round occupancy, 8766 hours, in unrestricted areas or workplace occupancy factors, 2000 hours, for a work year.)

Radiation Level Data

(Use of radiation survey instrument measurements and the inverse square law or use of RAM package Transport Index (TI) values or RAM package surface radiation levels and the inverse square law to calculate DDE.)

2. Committed Effective Dose Equivalent (CEDE):
Internal Exposure from Unsealed RAM OR Unsealed RAM and Sealed Sources

Calculate CEDE value for dose from internal radiation exposures.

Select one of the following methods:

- Current or requested RAM use does not correspond to one of the options listed below, separate calculations of the CEDE dose contributions will be performed to include a description of each RAM type and quantity.
- To determine the annual CEDE MOP dose for iodine 131 used as liquid NaI in quantities > 10 mCi, or I-131 used in any other chemical, liquid, or capsule form (e.g., Hippuran, diagnostic or therapeutic capsules, etc.) in quantities greater than 1,000 mCi, follow the steps listed below:
 1. Determine the total annual activity (in mCi) of liquid I-131 used in therapeutic and diagnostic procedures, excluding I-131 in capsule form or sealed sources.
 2. Divide the number by 10 and round to the nearest whole number. This value is the calculated CEDE MOP dose (in mrem) resulting from this licensed activity.
- To determine the annual CEDE MOP dose resulting from use of any other chemical, liquid, or capsule form of I-131 (e.g., Hippuran, diagnostic or therapeutic capsules, etc.) for therapeutic and diagnostic procedures, follow the steps listed below:
 1. Determine the annual use any other chemical, liquid, or capsule form of I-131 from therapeutic and diagnostic procedures (in mCi).
 2. Divide this number by 1,000 and round to the nearest whole number. This value is the CEDE dose (in mrem).
- To determine the CEDE resulting from annual Sr-89 use > 2,000 mCi, follow the steps listed below:
 1. Determine the annual use of Sr-89 (in mCi).
 2. Divide this number by 2,000 and round to the nearest whole number. This is the CEDE dose (in mrem) received for the use of these materials.

3. Total Effective Dose Equivalent (TEDE)

The **DDE** is added to **CEDE** to produce the dose resulting from internal and external radiation exposures (**TEDE**).

Note: To demonstrate compliance w/ 64E-5.312(1)(a), TEDE must be \leq 100 mrem.
To demonstrate compliance w/ 64E-5.313(2)(b)2., DDE must be \leq 50 mrem.