Appendix C.

PROCEDURE FOR CALCULATING COMMITTED EFFECTIVE DOSE EQUIVALENT (CEDE)

[Instructions provided on Page 2]

Description of Radioactive Materials Use -- Types & Quantities		
☐	5 mrem	For any RAM w/ an ALI value ≥ 100 μCi, total use ≤ 400 mCi in any 12 month period, except C-14; this includes the following RAM: **Cl-36 Cu-64 H-3 N-65 P-32 Rb-81m Sc-46** **Co-57 Fe-55 Hg-203 Na-22 P-33 S-36 Sm-153** **Co-60 Fe-59 I-123 Ni-63 Rb-81 Sb-119 Zn-65** Note: ALI values are listed in Table I, Column 2 of *ALIs, DAC, and Effluent Concentrations,* July 1993 (appended to the end of Chapter 64E-5. F.A.C.)
☐	1 mrem	**C-14** use in any form is ≤ 400 mCi in any 12 month period
☐	1 mrem	**C-14** use in non-volatile forms is ≤ 4 Ci in any 12 month period
☐	1 mrem	**I-125** use in any form is ≤ 1.2 mCi in any 12 month period
☐	1 mrem	**I-125** use in non-volatile forms (other than NaI and not involving heating or exothermic chemical reaction) is ≤ 1200 mCi in any 12 month period
☐	1 mrem	**I-125** use in non-volatile forms (other than NaI and involving heating or exothermic chemical reaction) is ≤ 120 mCi in any 12 month period
☐	1 mrem	**I-125** use as gases and volatile forms (other than NaI and not involving heating or exothermic chemical reaction) is ≤ 12 mCi in any 12 month period
☐	1 mrem	**I-125** use as gases and volatile forms (other than NaI, and involving heating or exothermic chemical reaction) is ≤ 1.2 mCi in any 12 month period
☐	1 mrem	**I-131** use in any form is ≤ 1 mCi in any 12 month period
☐	1 mrem	**I-131** use in non-volatile forms (other than NaI, and not involving heating or exothermic chemical reaction) is ≤ 1000 mCi in any 12 month period
☐	1 mrem	**I-131** use in non-volatile forms (other than NaI, and involving a heating or exothermic chemical reaction) is ≤ 100 mCi in any 12 month period
☐	1 mrem	**I-131** use as gases and volatile forms (other than NaI, and not involving heating or exothermic chemical reaction) is ≤ 10 mCi in any 12 month period
☐	1 mrem	**I-131** use as gases & volatile forms (other than NaI, and involving heating or exothermic chemical reaction) is ≤ 1 mCi in any 12 month period
☐	__ mrem	**Other RAM** not listed above; attach description of types, quantities and the calculations performed to determine their CEDE dose contribution
SUM ☒	**CEDE (mrem)**	← Sum the applicable doses and enter the calculated total CEDE value in the space provided to the left; use this value in Appendix A

Appendix C. PROCEDURE FOR CALCULATING CEDE

INSTRUCTIONS

If licensed for, or seeking licensure for use of unsealed radioactive material (RAM) or both sealed and unsealed RAM, the internal as well as external radiation hazard must be evaluated to demonstrate compliance with the public dose limits described section 64E-5.312, Florida Administrative Code (F.A.C.)

Committed Effective Dose Equivalent (CEDE) refers to the dose resulting from internal radiation exposures. The CEDE is combined with the **Deep Dose Equivalent (DDE)**, the dose from external whole body exposures, to produce the **Total Effective Dose Equivalent (TEDE)**, the dose resulting from internal and external radiation exposures. Refer to section 64E-5.101, F.A.C. (or Page 2 of Appendix A) for complete definitions of these terms.

This procedure provides a method of calculating the CEDE value required by Appendix A, "Procedure for Calculating Total Effective Dose Equivalent."

- **New licensee applicants**: Mark each box that corresponds with requested RAM authorizations
- **Current licensees**: Mark each box that corresponds with licensed RAM authorizations

> **Note: The following may be excluded from CEDE calculations:**
> - **Sealed sources**
> - **Exposure from oral pathways or wounds**
> - **Molybdenum 99 from Mo-99/Tc-99m generators based on the Mo-99 breakthrough limit of < 0.15 μCi of Mo-99 per mCi of Tc-99m**

- If any current or requested RAM use does not correspond to the listed options, perform separate calculations of their CEDE dose contributions; attach a description of each RAM type and quantity, and the CEDE calculations performed to determine their dose contribution.
- Sum the applicable mrem values from the marked boxes and enter the sum in the last box; use this value in Appendix A.