

## Changes to Radiation Protection Regulations

### Discussion Item:

The U.S. Nuclear Regulatory Commission is soliciting comments on regulatory issues and options for potential changes to 10 CFR 20, "Standards for Protection Against Radiation," to achieve greater alignment between the regulations and ICRP Publication 103, "The 2007 Recommendations of the International Commission on Radiological Protection."

- Replaces ICRP Publication 60, "1990 Recommendations of the International Commission on Radiological Protection"
  - No substantial changes to radiological protection regulations or policy guidance
- Propose the use of "Reference Animals and Plants" in order to establish a basis for acceptable dose to the environment.
- The most significant change from Publication 60 is the 6-8 fold reduction in the nominal risk coefficient for heritable (stochastic) effects.
- The Radiation Weighting Factors,  $W_R$ , values for protons and neutrons are different than Publication 60
- Discuss the use of EPD's for legal dosimeters
- Declared pregnant females should not exceed about 1 mSv (100 mrem) to embryo/fetus
- Dose limits consistent with Publication 60:
  - Effective dose of 20 mSv (2 rem) per year, averaged over defined 5 year periods [100 mSv (10 rem) in 5 years], with the further provision that the effective dose should not exceed 50 mSv (5 rem) in any single year.
- Publication 60 resulted in dose conversion factors (DCF) as defined in ICRP Publication 68, "Dose Coefficients for Intakes of Radionuclides by Workers." This modeling has not been completed for Publication 103.

### For Information:

The U.S. Nuclear Regulatory Commission agrees with the Staff that the current NRC regulatory framework continues to provide adequate protection of the health and safety of workers, the public and the environment.

### Question:

Recommendations for implementation and pros or cons?