

Tritium Dose Pathway Comparison – Regulatory Guide 1.109 and Beyond

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ABSTRACT

Regulatory Guide 1.109 presents equations to be used to calculate radiation dose to a member of the public resulting from releases of radioactive effluents. In the case of tritium releases, some power plants have determined that the relative millirem-per-Curie dose consequences can be 100 to 1000 times higher for airborne releases compared to liquid releases. Such differences in dose impact can influence decisions relevant to effluent management strategies. This presentation will discuss some of the aspects of the Regulatory Guide 1.109 equations that may contribute to the differences, as well as introducing a new set of tritium dose pathway models that recently appeared in the Health Physics Journal.