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Risk-Informed, Technology-Inclusive Regulatory Framework for Advanced Reactors

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Submitter Information

Name: Ryan Baker

Address:

Huntingtown, MD, 20639

Email: Bioscache2@gmail.com

General Comment

In addressing risk informed, technology-inclusive regulatory framework, the NRC should examine what its foundation for risk is. The primary basis for risk is radiation and yet the linear no-threshold model is poorly supported by scientific evidence and has growing evidence showing it to be invalid. In examining acceptable risk for new reactors (or truly any reactor) the NRC has a responsibility to ensure that the risk to humans, the environment, etc is based on a solid scientific basis. Re-examining the linear no threshold model and what the true level of risk is for radiation at the mrem level will ensure the nuclear reactors are evaluated fairly. In addition, there is no "conservative estimate" here as misclassifying the risk higher than determined by scientific evidence will have the effect of discouraging nuclear reactors. This will push energy needs into other solutions that carry risk often higher than that of nuclear reactors. While these other technologies may be outside the purview of the NRC, it doesn't make the risk disappear.

By setting a scientifically valid baseline of risk per mrem, the NRC can then evaluate the additional risk (if any) of each incremental mrem and ensure that nuclear reactors are evaluated on a fair and technically accurate basis.