



Risk-Informed Materials Assessment Project

DAN WIDREVITZ

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2 | Risk-Informed Materials Assessment Project (RIMA)

NRC/NRR staff seek to develop guidance on the use of Risk-Informed Decision Making (RIDM) in the materials engineering context.

Goal:

Regulatory guidance providing framework for submitting and reviewing applications with RIDM aspects while remaining (on the NRC side) maximally within the purview of DNRL materials engineering review.

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RIMA Challenge

NRC has observed increase in RIDM and RIDM-like applications. Diversity of approach both in applications and review require substantial resources.

Key NRC challenges:

- Existing NRC RIDM guidance focused on use of PRA
- RIDM guidance for passive component integrity not available
- Handling of uncertainties within RIDM approach lacks discipline specific guidance

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RIMA Ambitions

Staff seek to produce regulatory guidance based roughly on approach in RG 1.245, *Preparing Probabilistic Fracture Mechanics Submittals*.

Guidance would provide key aspects to include in high-quality submittals as well as the interaction between these key aspects as they may relate to NRC review decisions.

Guidance will support potential to “grade” submittal, in terms of scope and depth of review, based on subject specific considerations

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RIMA Status

NRC staff have developed internal draft concepts and are iterating on draft.

Draft core topics:

- 1a. Addressing defense-in-depth
- 1b. Addressing safety margin
- 1c. Addressing risk impacts
2. Addressing performance monitoring
3. Topic specific appendices (such as Binomial approach)

Public participation in project is planned in future stages– we welcome your input and feedback!

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QUESTIONS