

USED FUEL STORAGE AND TRANSPORTATION ISSUE RESOLUTION PLAN

Issue Number: I-20-01

Performance Margins Recommendation: IV-3 (Cat 1)

Rev. 2.26.2020

Title: Develop industry Best Practices guide for thermal modeling

I. Summary of Resolution Plan

Industry and NRC will interact in public meetings and workshops as well as through letters to achieve the following:

- Identify the current issues for industry with the implementation of the current best practices guidance
- Using the identified recommendations from the Thermal Modeling and Decay Heat PIRTs (Recommendation IV-1), create guidance for an informed approach, including (for example):
 - greater flexibilities with more accurate decay heat models
 - realistic ambient temperature measurements vs. upper bound assumptions
 - graded approach for mesh convergence (currently costly GCI needed by all vendors)
 - pave the way to using alternative fuel performance metrics such as:
 - Use of stress analysis + peak clad temperature
 - Average rod temperature vs. peak clad temperature
- Implement the guidance into a Topical Report.
- Submit the Topical Report to NRC for approval and endorsement (Note this action will accomplish Recommendation IV-2)

II. Proposed Actions and Due Dates

ACTION	RESPONSIBLE PARTY	DUE DATE
1. Complete initial revision of RIRP	NEI	March 19, 2020
2. Review and discuss guidance to be developed at workshop	NEI & NRC	March 25-26, 2020
3. Gross Rupture Definition PIRT/Workshop	NEI/EPRI & NRC	TBD
4. Synthesis PIRT/Workshop of the Cumulative Impacts of Overlapping Bounding Inputs, Assumptions, and Uncertainties	NEI/EPRI & NRC	TBD
5. Workshop on Alternative Fuel Performance Metric(s) to Ensure no Gross Ruptures	NEI/EPRI & NRC	TBD
6. Thermal Modeling/Stress Analysis Approach to Meet Alternative Fuel Performance Metrics	NEI/EPRI & NRC	TBD
7. Develop draft Topical Report for thermal modeling and performance metrics	NEI	TBD
8. Review draft Topical Report in follow-on public workshop	NEI & NRC	TBD
9. Revise TR based on workshop alignment	NEI	TBD
10. Submit TR following revision and review	NEI	TBD
11. NRC provides letter affirming applicability of TR	NRC	TBD
12. NRC initiate review, approval, and endorsement of Topical Report (i.e. implementation of Recommendation IV-2)	NRC	
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