

SPENT FUEL STORAGE AND TRANSPORTATION ISSUE RESOLUTION PLAN

Issue Number: I-20-06

Performance Margins Recommendation: IV-2 (Cat 2)

Rev. 3.27.2020

Note: This document is DRAFT and the positions noted therein are preliminary NRC staff positions. This DRAFT is being made publicly available to support discussions at an April 2020 public workshop.

Title: Use of PIRT to perform thermal evaluations in applications for Certificate of Compliance or Specific License.

I. Summary of Resolution Plan

The NRC staff is evaluating an industry recommendation where, when applicants have applied the results of a PIRT, NRC would limit the review to verify that the results of a PIRT have been appropriately applied instead of performing confirmatory analysis to verify applicant's thermal predictions. For this purpose, NRC would need to revise its internal review guidance to implement this recommendation.

This recommendation is related to Recommendations IV-1, IV-3, and IV-4 in the Nuclear Energy Institute's (NEI's) Spent Fuel Performance Margin White Paper (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19318D971). In Recommendations IV-1, IV-3, and IV-4, industry is considering the development and use of a PIRT to identify (a) the inputs, modeling approaches/techniques that have large impact on the results, and (b) those that don't and hence don't require scrutiny. Industry could then develop an industry consensus based thermal modeling methodology and document this as a best practices guide, and develop a thermal modeling metric such as a peak cladding temperature limit (PCT) that is based on more scientific information.

In parallel with industry's activities on Recommendations IV-1, IV-3, and IV-4, the NRC staff is considering current review guidance based on the developed PIRT results, once the PIRT is available. Before any effort to revise review guidance, NRC will conduct an independent peer review and perform any additional sensitivity studies to support or update industry's proposed PIRT.

The NRC staff will lead this activity by taking the following actions. The NRC staff will seek and incorporate external stakeholder feedback (i.e., industry and public) as noted and at additional intervals as appropriate and identified during this activity. This resolution plan assumes NRC has received developed PIRT from Recommendation IV-1 of NEI's White Paper.

- Await availability of PIRT
- Perform peer review of proposed industry's PIRT and identify if additional justification and/or analysis are required
- Conduct a public workshop to discuss results of NRC's peer review and receive feedback from stakeholders
- Using public feedback, develop draft review guidance based on a balanced consideration of the level of review and the PIRT results
- Evaluate and incorporate, as appropriate, the specific recommendation made in Recommendations IV-2 into draft review guidance
- Pilot the approach on an appropriate application
- Conduct public meetings to inform and obtain feedback from the stakeholders, including the general public, the general licensees, and the cask vendors, on the potential changes in the approach
- Conduct a public meeting(s) to present major conclusions and potential resolutions of the RIRP issues from pilot review

- Update NRC review guidance, as appropriate, and make revised guidance publicly available

II. Proposed Actions and Due Dates

ACTION	RESPONSIBLE PARTY	DUE DATE
1. Await availability of PIRT	Industry	TBD
2. Perform peer review of PIRT and identify any additional justification	NRC	June 2020
3. Conduct a public workshop to discuss alternatives and receive feedback from stakeholders	All	July 2020
4. Develop draft review guidance	NRC	December 2020
5. Await conclusions of spent fuel performance margins white paper Recommendations IV-3 and IV-4.	All	December 2020 (assumption)
6. Review results of Recommendations IV-3 and IV-4, and incorporate into draft review guidance	NRC	February 2021
7. Conduct public meeting to present revised guidance	All	April 2021
8. Select pilot application to apply PIRT review method.	NRC/Industry	May 2021
9. Gather lessons learned on pilot review	NRC/Industry	TBD
10. Conduct a public meeting to review lessons learned/modify approach as needed	NRC	TBD
11. Update NRC review guidance	NRC	TBD
12. Hold public meeting on draft guidance	NRC	TBD
13. Finalize review guidance and utilize for upcoming reviews	NRC	TBD