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September 26, 2019

Ms. Mary Jane Ross-Lee  
Acting Division Director  
Division of Licensing Projects  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**Subject:** Transmittal of EPRI Benchmark Revision 1-A, Utilization Revision 2, Utilization Revision 2-A, and NEI 12-16, Revision 4

**Project Number:** 689

Dear Ms. Ross-Lee:

On behalf of the Nuclear Energy Institute's (NEI)<sup>1</sup> members and Electric Power Research Institute (EPRI), we are submitting the approved and published versions of the EPRI technical reports "Benchmarks for Quantifying Fuel Reactivity Depletion Uncertainty – Revision 1-A" and "Utilization of the EPRI Depletion Benchmarks for Burnup Credit Validation – Revision 2-A". These reports incorporate the NRC final safety evaluation report (ML19189A111) and transmittal letter (ML19189A112). Additionally, the reports contain historical review information consisting of the NRC requests for additional information (RAIs) and responses to RAIs as appendices. The EPRI benchmark report also contains the quality assurance letter in Appendix H.

In addition to the published EPRI reports, we are submitting a revision to NEI 12-16, "Guidance for Performing Criticality Analyses of Fuel Storage at Light Water Reactor Power Plants" and "Utilization of the EPRI Depletion Benchmarks for Burnup Credit Validation - Revision 2" that have been updated to incorporate the proposed changes resulting from the NRC Public Meeting on December 20<sup>th</sup>, 2018. These changes ensure consistency between NEI 12-16 and the EPRI technical reports. The changes to NEI 12-16 and the EPRI technical report are as noted in Attachment 3 to NEI's January 2019 letter (ML19196A276).

We look forward to working with the NRC on the implementation of this important component of the regulatory framework. The use of this guidance will support the continued assurance of spent fuel pool criticality safety

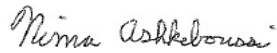
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<sup>1</sup> The Nuclear Energy Institute (NEI) is responsible for establishing unified policy on behalf of its members relating to matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include entities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect and engineering firms, fuel cycle facilities, nuclear materials licensees, and other organizations involved in the nuclear energy industry.

Ms. Mary Jane Ross-Lee  
September 26, 2019  
Page 2

and improve the efficiency in the preparation and review of licensing documents involving spent fuel pool criticality analysis. Please contact me if you have any questions or require additional information.

Sincerely,



Nima Ashkeboussi

Attachment 1: EPRI Benchmarks for Quantifying Fuel Reactivity Depletion Uncertainty – Revision 1-A  
(3002016035) - <https://www.epri.com/#/pages/product/000000003002016035/>

Attachment 2: EPRI Utilization of EPRI Depletion Benchmarks for Burnup Credit Validation – Revision 2-A  
(3002017254) - <https://www.epri.com/#/pages/product/000000003002017254/>

Attachment 3: EPRI Utilization of the EPRI Depletion Benchmarks for Burnup Credit Validation – Revision 2  
(3002016888) - <https://www.epri.com/#/pages/product/000000003002016888/>

Attachment 4: NEI 12-16, Revision 4

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