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January 9, 2017

Mr. Brian J. Benney  
Senior Project Manager  
Licensing Processes Branch  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**Subject:** Supplementary Response to Request for Additional Information Regarding EPRI Report 1022909, "Benchmarks for Quantifying Fuel Reactivity Depletion Uncertainty"

**Project Number: 689**

Dear Mr. Benney:

On behalf of the nuclear energy industry, the Nuclear Energy Institute (NEI)<sup>1</sup> is providing a supplementary response to the Request for Additional Information Questions related to EPRI Report 1022909 that were provided by the NRC to NEI via letter dated February 4, 2016 [Ref. 1]. This EPRI Report supports the guidance provided in NEI 12-16, *Guidance for Performing Criticality Analyses of Fuel Storage at Light-Water Reactor Power Plants*, Revision 2, which was submitted to the NRC on January 9, 2017 [Ref. 2]

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

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We look forward to receiving the draft SER for these reports to support inclusion in the final version of NEI 12-16. EPRI plans to make available updated versions of EPRI Reports 1022909 and 1025203 no later than February 2017. I look forward to continuing to work with the NRC staff to finalize this important guidance document in the first quarter of 2017. Please do not hesitate to contact me at any time with questions.

Sincerely,



Kristopher W. Cummings

References:

- [1] Request for Additional Information Related to "Benchmarks for Quantifying Fuel Reactivity Depletion Uncertainty" and "Utilization of the EPRI Depletion Benchmarks for Burnup Credit Validation" (ML16007A034)
- [2] Submittal of NEI 12-16, *Guidance for Performing Criticality Analyses of Fuel Storage at Light-Water Reactor Power Plants*, Revision 2 – DRAFT B, dated January 2017

Attachment 1: CASMO-5 95/95 Tolerance Limits for Measure Reactivity Decrement Biases of the EPRI Studsvik Burnup Benchmark (15 pages)

Attachment 2: Data Used in EPRI Depletion Benchmark Analysis (61 pages)

c: Mr. William M. Dean, NRR, NRC  
Mr. Brian McDermott, NRR, NRC  
Mr. Timothy J. McGinty, NRR/DSS, NRC  
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