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May 6, 2021

Ms. Cherish K. Johnson
Chief Financial Officer
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Reconsideration of Industry Fee Exemption Request for Review and Endorsement of Industry Submittals of Guidance Related to Fuel Fragmentation Relocation and Dispersal Issues

Project Number: 689

Dear Ms. Johnson:

On January 12, 2021, the Nuclear Energy Institute (NEI)¹ submitted a request for a fee exemption under 10 CFR 170.11(a) for NRC review and feedback of Electric Power Research Institute (EPRI) Report 3002018457, "Alternative Licensing Approaches for Higher Burnup Fuel." As stated in NEI's request, the EPRI report is intended to assist in generic regulatory improvements to establish a stable and predictable licensing pathway for high-burnup fuel by addressing an NRC staff concern related to fuel fragmentation, relocation, and dispersal (FFRD). In a letter dated March 8, 2021, the NRC denied this exemption request. NEI requests that the NRC reevaluate its earlier determination and grant the fee exemption based on the following additional information concerning the industry's current state of technical and licensing activities for higher burnup fuel, including fuel vendor preferences to use the approach detailed in the EPRI report.

The March 8 letter denied the fee exemption request because "the NRC does not have specific plans to develop regulatory guidance or other generic regulatory improvements or efforts due to the industry's current state of technical and licensing activities for higher burnup fuel." According to the March 8 letter, "fuel vendors are developing their own approach(es) to licensing higher burnup fuel and they may or may not use the approach detailed in this EPRI report." Based on this incorrect understanding of current industry activities and approaches, "the NRC staff did not make any recommendation or representation of an approved fee exemption for future direct engagements." But the March 8 letter did state that "[t]here is mutual interest in the possible development of regulatory guidance or other generic regulatory

¹ 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.

improvements for the licensing of higher burnup fuel when the state of technical and licensing activities are more advanced, which may include a unified licensing approach proposed by industry.”

Industry technical and licensing activities are sufficiently advanced such that NRC review and feedback on the EPRI report at this time is vital to supporting a unified industry licensing approach and the development of regulatory guidance or other generic regulatory improvements for the licensing of higher burnup fuel. The NRC staff has identified a concern that there may be insufficient data on FFRD for higher burnup fuel. To address this staff concern, the industry’s primary focus is on adopting and implementing the approach in the initial EPRI Report 3002018457. EPRI, in consultation with the fuel vendors, developed the approach utilizing a risk-informed approach. With necessary NRC review and feedback, the final EPRI report will serve as the basis for how vendors address FFRD in their topical submittals. As a result, NRC review and feedback on the initial EPRI report at this time will result in cost savings and other benefits for the NRC (*i.e.*, the staff will review risk-informed vendor submittals using the same EPRI approach).

As the March 8 letter acknowledges, fuel vendors have been working on additional approaches to respond to the NRC staff’s FFRD concerns. But it is standard practice for vendors to develop primary and secondary licensing paths because of the regulatory and technical uncertainties. The attachments to this letter contain letters of support from the fuel vendors outlining the critical importance of the EPRI approach to these vendors. Vendors may continue to consider other paths concurrently, but the most promising and preferred path forward is the EPRI approach. Thus, NRC review of the EPRI approach will assist in resolving the NRC staff’s FFRD concerns and in generic licensing improvements for higher burnup fuel.

The March 8 letter indicated that the NRC staff did not make any recommendations for the approval of the fee waiver. This letter, however, provides additional information concerning the current state of industry technical and licensing activities for higher burnup fuel, including fuel vendor preferences to use the approach detailed in the EPRI report. With this additional information, it should be clear that regulatory efficiency and other generic regulatory improvements can be assisted by NRC’s review of the EPRI report and the development of a common approach to address the NRC staff’s FFRD concerns. With NRC review and feedback, the EPRI approach can be implemented by the fuel vendors and would minimize the use of alternative approaches in vendor topical reports. Ultimately, utilities would adopt these vendor methodologies and reference the final EPRI report to ensure a consistent approach between not only vendor topical reports but also the subsequent utility license amendment requests that reference the methodology in those vendor reports.

In summary, the additional information included in this letter demonstrates that the criteria of 10 CFR 170.11(a) are met. The EPRI report addresses a potential safety issue identified by the NRC staff and will assist the NRC in generic regulatory improvements and other efforts for higher burnup fuel. NEI requests that, with this additional information and the attached letters of support from the vendors, NRC reevaluate its decision and grant the requested fee exemption.

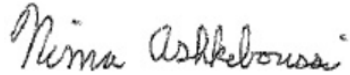
Ms. Cherish K. Johnson

May 6, 2021

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Please contact me should you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Nima Ashkeboussi".

Nima Ashkeboussi

Attachments: Vendor Letters

c: Joe Donoghue, NRR
Michael Case, RES
NRC Document Control Desk



April 27, 2021
NRC:21:016

Ms. Cherish K. Johnson
Chief Financial Officer
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Reconsideration of Industry Fee Exemption Request for Review and Endorsement of Industry Submittals of Guidance Related to Fuel Fragmentation Relocation and Dispersal Issues

Dear Ms. Johnson:

Framatome, Inc. (Framatome) is providing this letter in support of the NEI fee exemption request to the NRC to cover activities associated with reviewing and providing feedback on background document EPRI Report 3002018457, "Alternative Licensing Approaches for Higher Burnup Fuel" under 10 CFR 170.11(a). Framatome has been an active participant in industry meetings and is very supportive of the approach being addressed in the EPRI report that will be a critical component of our plans to address fuel fragmentation, relocation, and dispersal (FFRD).

While Framatome is developing multiple strategies to address FFRD in order to deploy high burnup fuel as part of our overall risk mitigation strategy, the EPRI risk-informed approach is of great interest and will be adopted if approved.

This letter contains no NRC commitments.

If you have any questions related to this information, please contact me by telephone at (434) 832-3945, or by e-mail at Gary.Peters@framatome.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Gary Peters".

Gary Peters, Director
Licensing & Regulatory Affairs
Framatome Inc.

cc: Michael Case, RES
Joe Donoghue, NRR
Andrea Kock, NRR
Ngola Otto, NRR
NRC Document Control Desk
Nima Ashkeboussi, NEI
Project 728/Project 689

bcc: NRC:21:016
T Point: T4.12.2

Morris	Byram
Gayle	Elliott
Robert	Freeman
Steve	Lydzinski
Alan	Meginnis
Phil	Opsal
Gary	Peters
Jeff	Reid



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April 30, 2021

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Ms. Cherish K. Johnson
Chief Financial Officer
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

**Subject: Endorsement of Industry Submittals of Guidance Related to Fuel Fragmentation
Relocation and Dispersal Issues**

Ms. Johnson,

GNF is providing this letter in support of the NEI fee exemption request to the NRC to cover activities associated with reviewing and providing feedback on background document EPRI Report 3002018457, “Alternative Licensing Approaches for Higher Burnup Fuel” under 10 CFR 170.11(a). GNF has been an active participant in industry meetings and is very supportive of the approach being addressed in the EPRI report that will be a critical component of our plans to address fuel fragmentation, relocation, and dispersal (FFRD).

While GNF is developing multiple strategies to address FFRD in order to deploy high burnup fuel as part of our overall risk mitigation strategy, the EPRI risk-informed approach is of great interest and will be adopted if approved. The current strategy for GNF relative to FFRD is a planned risk-informed burnup extension topical report expected for submittal in late 2021 or early 2022. We will be monitoring the progress of the EPRI program as it relates to our activities for burnup extension.

This letter contains no NRC commitments. If you have any questions, please contact myself.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kent Halac', with a stylized flourish at the end.

Kent Halac
Senior Engineer, Regulatory Affairs
Global Nuclear Fuel – Americas, LLC

cc: B.R. Moore (GNF)
M. Catts (GEH)



Westinghouse Electric Company
1001 Pinnacle Point Drive
Columbia SC 29223
USA

Ms. Cherish K. Johnson
Chief Financial Officer
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

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Direct fax: 860-731-0449
e-mail: karoutze@westinghouse.com
Our Ref.: GATFT-21-019

Date: April 20, 2021

Re: Vendor Support of Fee Exemption Request

Dear Ms. Johnson,

Westinghouse Electric Company is providing this letter in support of the NEI fee exemption request to the NRC to cover activities associated with reviewing and providing feedback on background document EPRI Report 3002018457, "Alternative Licensing Approaches for Higher Burnup Fuel" under 10 CFR 170.11(a). Westinghouse Electric Company is very supportive of the approach being described in the EPRI report to address fuel fragmentation, relocation, and dispersal (FFRD) phenomena in a risk-informed manner.

The report describes an approach in which the specific phenomenon of FFRD would be assessed in terms of safety consequences when implementing core designs with higher burnup fuel. The existing regulatory framework for emergency core cooling system adequacy and cladding integrity in accident scenarios would remain; the Regulatory Guide 1.174 risk-informed process would be used to determine if the risks associated with higher burnup core designs are acceptably small.

Recognizing technical, regulatory, and schedule risks associated with the resolution of concerns related to FFRD, Westinghouse has developed multiple strategies to address FFRD, one of which relies upon the EPRI alternative licensing approach. The EPRI approach leverages risk-informed elements to reduce the data burden associated with detailed research and modeling of FFRD-related phenomena, which is beneficial relative to industry in focusing efforts on more probable, more consequential events, and enables earlier deployment of advanced and safer fuels. Therefore, the EPRI risk-informed approach is a critical component of our plans and will be adopted or leveraged by Westinghouse and its utility customers if determined to be a viable regulatory approach.

This letter contains no NRC commitments. If you have any questions, please contact Zeses Karoutas.

Sincerely,

A handwritten signature in cursive script that reads 'Zeses Karoutas'.

Signature of Westinghouse's Authorized Official

4/22/2021

Date

Zeses Karoutas, Chief Engineer Fuel
Engineering & Safety Analysis
Name and Title of Authorized Official

Electronically Approved Records Are Authenticated in the Electronic Document Management System