



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

June 22, 2020

Ms. Michelle P. Catts  
Senior Vice President, Regulatory Affairs  
GE-Hitachi Nuclear Energy Americas, LLC  
P.O. Box 780 M/C A-10  
Wilmington, NC 28401

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING GLOBAL  
NUCLEAR FUEL PROPOSED AMENDMENT 51 TO TOPICAL REPORT,  
NEDE-24011-P-A-29, GENERAL ELECTRIC STANDARD APPLICATION FOR  
REACTOR FUEL (EPID L-2020-TOP-0012)

Dear Ms. Catts:

By letter dated March 17, 2020 (Agencywide Documents Access and Management System Package Accession No. ML20077J160), Global Nuclear Fuel – Americas (GNF), submitted for the U.S. Nuclear Regulatory Commission (NRC) staff review Proposed Amendment 51 to NEDE-24011-P-A-29, "General Electric Standard Application for Reactor Fuel (GESTAR II)." Upon review of the topical report, the NRC staff has determined that additional information is needed to complete the review. Enclosed is the NRC staff's request for additional information question.

If you have any questions, please contact me at 301-415-6695 or by e-mail to [Ngola.Otto@nrc.gov](mailto:Ngola.Otto@nrc.gov).

Sincerely,

Ngola Otto, Project Manager  
Licensing Projects Branch  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Enclosure:  
As stated



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
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REQUEST FOR ADDITIONAL INFORMATION

REGARDING GLOBAL NUCLEAR FUEL PROPOSED AMENDMENT 51

TO TOPICAL REPORT, NEDE-24011-P-A-29,

GENERAL ELECTRIC STANDARD APPLICATION FOR REACTOR FUEL (GESTAR II)

By letter dated March 17, 2020 (Agencywide Documents Access and Management System (ADAMS) Package Accession No. ML20077J160), Global Nuclear Fuel – Americas submitted for U.S. Nuclear Regulatory Commission (NRC) staff review Proposed Amendment 51 to NEDE-24011-P-A-29, "General Electric Standard Application for Reactor Fuel (GESTAR II)." Below is the NRC staff request for additional information question:

1. Boiling Water Reactor (BWR) Standard Technical Specifications include a common lead test assembly (LTA) provision within Section 4.2.1, "Fuel Assemblies," which states in part that:

A limited number of lead test assemblies that have not completed representative testing may be placed in nonlimiting core regions.

A majority of operating BWRs contain this provision or similar language. Section B.1, "Introduction," of Amendment 51 refers to this LTA provision and states "... a licensee may load lead assemblies according to the requirements defined in this appendix, provided GESTAR II is referenced in the Technical Specifications (TS)."

Please provide modifications to Appendix B needed to clarify the connection between GESTAR II Lead Assembly Programs, TS 4.2.1 LTA provision and restrictions, and Title 10 of the *Code of Federal Regulations* 50.59, "Changes, Tests and Experiments."

2. Section B.2.3.1, "Burnup Limit and Quantities of High Burnup Lead Use Assemblies (HBLUAs)," of Amendment 51 defines a quantity of HBLUAs satisfying the limited number provision of TS 4.2.1 LTA provision. In addition, this section defines a maximum allowable fuel burnup limit based on European operating experience.

Please provide a summary of the European operating experience including established burnup limits, distribution of assemblies achieving exposures beyond current U.S. regulatory limit and at or beyond proposed HBLUA BU limit, post-irradiation examinations and measurements, and evidence supporting the validation of existing analytical models and acceptance criteria at the proposed burnup limit.

Enclosure

3. Section B.2.3.2, "HBLUA Limitations and Exceptions," of Amendment 51 describes a potential conflict between HBLUAs and limitations of applicability defined in RG [Regulatory Guide] 1.183, "Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors."

Please provide modifications to Appendix B needed to clarify the need to demonstrate that all radiological consequences docketed within the licensee's updated final safety analysis report remain conservative for all lead use programs even with some bundles or rods exceeding current exposure limits. Provide examples of changes in inputs and assumptions which may be used to assess the lead use program.

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REACTOR FUEL (EPID L-2020-TOP-0012) DATED JUNE 22, 2020

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**ADAMS Accession Nos.:**

**ML20168A960 (Package)**

**ML20168A944 (Letter/RAI);**

**ML20168A955 (E-mail transmittal)**

**\*by e-mail**

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