August 5, 2008

Andrew A. Lingenfelter, Manager
GNF Engineering
Global Nuclear Fuels - Americas, LLC
P.O. Box 780, M/C F12
Wilmington, NC 28402

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION RE: AMENDMENT 31, "STABILITY ANALYSIS AND SRLR TEMPLATE UPDATE," TO THE TOPICAL REPORT (TR) NEDE-24011P-A, "GENERAL ELECTRIC STANDARD APPLICATION FOR RELOAD FUEL (GESTAR II)" (TAC NO. MD8425)

Dear Mr. Lingenfelter:

By letter dated December 7, 2007 (Agencywide Documents Access and Management System Package Accession No. ML073470832), Global Nuclear Fuel - Americas, LLC submitted for U.S. Nuclear Regulatory Commission (NRC) staff review Amendment 31, "Stability Analysis and SRLR [Supplemental Reload Licensing Report] Template Update," to TR NEDE-24011P-A, "General Electric Standard Application for Reload Fuel (GESTAR II)." Upon review of the information provided, the NRC staff has determined that additional information is needed to complete the review. On July 24, 2008, James Harrison, Vice President, Fuel Licensing, Regulatory Affairs**,** and I agreed that the NRC staff will receive your response to the enclosed Request for Additional Information (RAI) questions by September 12, 2008. If you have any questions regarding the enclosed RAI questions, please contact me at 301-415-1774.

Sincerely,

/RA/

Michelle C. Honcharik, Senior Project Manager
Special Projects Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Project No. 712

Enclosure: RAI questions

cc w/encl: See next page

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ADAMS ACCESSION NO.: ML082060097 ***No major changes to input.** **NRR-106**

OFFICE	PSPB/PM	PSPB/LA	SRXB/BC	PSPB/BC
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DATE	8/4/08	7/31/08	7/10/08	8/5/08

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REQUEST FOR ADDITIONAL INFORMATION

BY THE OFFICE OF NUCLEAR REACTOR REGULATION

AMENDMENT 31, "STABILITY ANALYSIS AND SRLR TEMPLATE UPDATE"

TO TR NEDE-24011P-A,

"GENERAL ELECTRIC STANDARD APPLICATION FOR RELOAD FUEL (GESTAR II)"

GLOBAL NUCLEAR FUELS - AMERICAS, LLC (GNF)

PROJECT NO. 712

1. Please provide: (1) rationale to add Linear Heat Generation Rate (LHGR) in Sections 3.1.2 and 3.2.2, and Table 3.1; (2) description of inter-relationship among LHGR, Maximum Average Planar Linear Heat Generation Rate (MAPLHGR), Minimum Critical Power Ratio (MCPR), and Operating Limit MCPR (OLMCPR); and (3) assessment of LHGR impact on MAPLHGR, MCPR, and OLMCPR during reactor operation for core design.

2. Please define end of cycle (EOC) and end of rated (EOR) in Section 4.3.1.2.8, "End-of-Cycle Coastdown Construction", and S.5.13, "Thermal Power Monitor," and describe the difference when EOC and EOR are applied to a reactor operation.

3. Based on Figure 5.2-1 in Appendix B on Page US-6 under S.2.2.1, it appears that the change in delta critical power ratio (ΔCPR) versus initial minimum critical power ration (MCPR) may be 0.1 versus 0.5, not .01 versus 0.05. Please clarify that the statement is still valid when the change in ΔCPR is approximately 0.01 for 0.05 change in initial MCPR based on Figure 5.2-1 in Appendix B.

4. On Page US-2 under S.1.3, "Stability Analysis" and on Page US-37 under S.4.1.5, "DSS-CD [Detect and Suppress Solution – Confirmation Density]," please clarify that Reference S-103 is an approved version with an issued date.

5. On Page US-37 under S.4.1.3, "Option I-D," please clarify which NRC-approved frequency stability code as Reference S-96 will be applied.

6. Please provide a power/flow map to show the difference of the domain for Backup Stability Protection (BSP) for DSS-CD under S.4.2.3 and BSP for Option III under S.4.2.2, and describe what role Reference S-103 plays to generate a defined exclusion region.

7. It appears that references listed in Sections 3.6, 4.4, and S.6 consist of many methodologies without an approved version. Please describe the status of the references listed in Sections 3.6, 4.4, and S.6 references with respect to NRC-approved version and necessary update.

ENCLOSURE