



## Global Nuclear Fuel

A Joint Venture of GE, Toshiba, & Hitachi

### Global Nuclear Fuel

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#### **Proprietary Information Notice**

Attachments 2 & 3 to this letter contain GNF-A Company ~~proprietary~~ information which is to be withheld from public disclosure in accordance with 10CFR2.390 and RIS 2005-31. Upon removal of attachments 2 & 3, the balance of this letter may be made public.

SPM 14-030

July 30, 2014

Director, Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Attn: Document Control Desk

Subject: GNF-A Request for Letter Authorization to Use the RAJ-II Package

References: 1) Model RAJ-II - Certification Number 9309 Rev. 9, Docket Number 71-9309, Package Identification USA/9309/B(U)F-96  
2) Model RAJ-II Safety Analysis Report, Revision 7, 5/4/09  
3) NRC/GNF-A Meeting, 5/28/14  
4) NRC/GNF-A Meeting, 7/9/14  
5) GEH Request for Renewal of RAJ-II Package CoC, Revised SAR Revision 7.1, 7/11/14

Dear Sir or Madam:

As discussed with NRC Spent Fuel Storage and Transportation staff on May 28, 2014 and July 9, 2014 (References 3 and 4) Global Nuclear Fuel-Americas L.L.C. (GNF-A) hereby submits a request for a letter authorization to use the RAJ-II package for shipment of a new fuel assembly design known as GNF3. GNF-A has contracted with a utility customer for the delivery of eight GNF3 lead use assemblies (LUA's) for use at one of its currently operating nuclear power plants. GNF-A is also in the process of negotiating with a second utility for additional GNF3 LUA's at other nuclear power plants. This letter authorization is needed because the timeframe for the delivery of these LUA's is not supported by the time required to revise the CoC to add the new fuel design as an authorized content in the RAJ-II package. The first LUA shipment is scheduled in January 2015 and additional shipments are expected through 2016. For this reason, GNF-A requests NRC review and approval of the attached submittal by December 31, 2014.

#### **SUMMARY**

GNF-A is requesting a letter authorization to use Certificate of Compliance (CoC) No. 9309, Rev. 9 and the Model RAJ-II transportation package to transport a new GNF3 fuel assembly design. The Model RAJ-II package is currently authorized to transport unirradiated fuel rods and fuel assemblies and will not be modified for this request. The GNF3 design, while similar to contemporary GNF-A fuel designs, is not covered by certain fuel assembly parameters in the current RAJ-II CoC. All other requirements of the current CoC remain applicable. In a letter authorization request (Attachment 2 to this letter), GNF-A provides sufficient assessment and supplemental evaluations that the new assembly design does not affect the ability of the package to meet the requirements of 10 CFR 71 and can be approved.

## EVALUATION

The GNF3 fuel assembly design is described in Attachment 2 to this letter. The parameters of the GNF3 design that are not within the current RAJ-II CoC, Table 3 Fuel Assembly Parameters are highlighted in Table 1-1 in Attachment 2 to this letter.

Also in Attachment 2 to this letter, GNF-A provides the letter authorization request and technical basis for NRC staff review based on the current Model RAJ-II Radioactive Material Transport Package Safety Analysis Report, Revision 7 (Reference 2) and as amended in the updated Safety Analysis Report, Revision 7.1 (Reference 5). The Attachment 2 information has been formatted consistent with NRC Regulatory Guide 7.9 "Standard Format and Content of Part 71 Packages for Radioactive Material" to aid NRC staff review and approval.

GNF-A has performed specific structural and criticality evaluations to supplement the RAJ-II package Safety Analysis Report for these LUA shipments. A structural evaluation demonstrates that the GNF3 fuel assembly within the RAJ-II package meets all of the structural requirements of 10 CFR 71.71 and 10 CFR 71.73 and is bounded by the package testing performed for the current authorized contents. Criticality safety evaluations demonstrate that the RAJ-II package design has sufficient reactivity margin under normal and accident conditions to safely transport the GNF3 fuel assembly design. These evaluations are provided in Attachment 2, Section 2 (Structural Evaluation) and Section 6 (Criticality Evaluation).

Except for certain fuel assembly parameters shown in the current RAJ-II CoC, all other requirements of CoC No. 9309, Rev. 9 remain applicable.

## CONDITIONS

For the LUA shipments, the following conditions will apply and have been incorporated into the GNF-A specific evaluations:

- 1) The fuel assemblies will contain UO<sub>2</sub> and gadolinium only, although the gadolinium was not credited in the criticality safety analyses for this request.
- 2) The fuel assemblies will contain commercial grade uranium and meet Type A material contents.
- 3) The fuel assemblies will be shipped unchanneled,
- 4) There will be a maximum of four RAJ-II packages on a single truck, each containing a maximum of two fuel assemblies,

## CONCLUSION

Based on the statements and representations contained in the letter authorization request and the conditions listed above, GNF-A concludes that the GNF3 fuel assembly design has been adequately described and evaluated, meets the requirements of 10 CFR Part 71, and can be safely transported in the Model RAJ-II package.

Please contact Bryce MacDonald at 910-819-6537 or myself if there are questions regarding this request.

Sincerely,

  
Scott P. Murray, Manager  
Facility Licensing

Commitments: As described above (1-4)

Attachments: 1. Affidavit  
2. GNF3 Lead Use Assembly Description, RAJ-II Letter Authorization Request and Technical Basis (contains proprietary information)  
3. LS-DYNA Input Files & KENO Input/Output Files (contains proprietary information)

Cc: H. Akhavanik – USNRC SFS&T

Attachment 1

Global Nuclear Fuel - Americas LLC

**AFFIDAVIT**

I, **Scott P. Murray**, state as follows:

- (1) I am the Manager, Facility Licensing of Global Nuclear Fuel – Americas, LLC (GNF-A), and have been delegated the function by GNF-A of reviewing the information described in paragraph (2) which is sought to be withheld, and have been authorized to apply for its withholding.
- (2) The information sought to be withheld is contained in Attachments 2 - 3 to GNF's letter, SPM 14-030, Scott P. Murray to Director, Division Spent Fuel Storage & Transportation entitled GNF-A Request for Letter Authorization to Use the RAJ-II Package. GNF proprietary information in Attachments 2 - 3 is identified by the statement "Contains GNF-A Proprietary Information".
- (3) In making this application for withholding of proprietary information of which it is the owner or licensee, GNF-A relies upon the exemption from disclosure set forth in the Freedom of Information Act (FOIA), 5 USC Sec. 552(b)(4), and the Trade Secrets Act, 18 USC Sec. 1905, and NRC regulations 10 CFR 9.17(a)(4), and 2.390(a)(4) for trade secrets (Exemption 4). The material for which exemption from disclosure is here sought also qualifies under the narrower definition of trade secret, within the meanings assigned to those terms for purposes of FOIA Exemption 4 in, respectively, Critical Mass Energy Project v. Nuclear Regulatory Commission, 975 F2d 871 (DC Cir. 1992), and Public Citizen Health Research Group v. FDA, 704 F2d 1280 (DC Cir. 1983).
- (4) The information sought to be withheld is considered to be proprietary for the reasons set forth in paragraphs (4)a. and (4)b. Some examples of categories of information that fit into the definition of proprietary information are:
  - a. Information that discloses a process, method, or apparatus, including supporting data and analyses, where prevention of its use by GNF-A's competitors without license from GNF-A constitutes a competitive economic advantage over GNF-A and/or other companies.
  - b. Information that, if used by a competitor, would reduce their expenditure of resources or improve their competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing of a similar product.
- (5) To address 10 CFR 2.390(b)(4), the information sought to be withheld is being submitted to the NRC in confidence. The information is of a sort customarily held in confidence by GNF-A, and is in fact so held. The information sought to be withheld has, to the best of my knowledge and belief, consistently been held in confidence by GNF-A, not been disclosed publicly, and not been made available in public sources. All disclosures to third parties, including any required transmittals to the NRC, have been made, or must be made, pursuant to regulatory provisions or proprietary and/or confidentiality agreements that provide for maintaining the information in confidence. The initial designation of this information as proprietary information and the subsequent steps taken to prevent its unauthorized disclosure are as set forth in the following paragraphs (6) and (7).
- (6) Initial approval of proprietary treatment of a document is made by the manager of the originating component, who is the person most likely to be acquainted with the value and sensitivity of the information in relation to industry knowledge, or who is the person most likely to be subject to the terms under which it was licensed to GNF-A.
- (7) The procedure for approval of external release of such a document typically requires review by the staff manager, project manager, principal scientist, or other equivalent authority for technical content, competitive effect, and determination of the accuracy of the proprietary designation. Disclosures outside GNF-A are limited to regulatory bodies, customers, and potential customers, and their agents, suppliers, and licensees, and

