



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402-2801

January 15, 2010

10 CFR 50.4
10 CFR 50.90

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Browns Ferry Nuclear Plant, Unit 1
Facility Operating License No. DPR-33
NRC Docket No. 50-259

Subject: **Response to NRC Request for Supplemental Information
Regarding Technical Specification Change TS-467 - Utilization of
AREVA Fuel and Associated Analysis Methodologies**

- References:
1. Letter from TVA to NRC, "Technical Specification Change TS-467 - Utilization of AREVA Fuel and Associated Analysis Methodologies," October 23, 2009
 2. Letter from TVA to NRC, "Technical Specification Change TS-467-S - Utilization of AREVA Fuel and Associated Analysis Methodologies – Non EPU Supplement," November 17, 2009
 3. Letter from NRC to TVA, "Browns Ferry Nuclear Plant Unit 1 - Nonacceptance of Utilization of AREVA Fuel and Associated Analysis Methodologies (TAC No. ME2451)(TS-467)," December 23, 2009

By letter dated October 23, 2009 (Reference 1) and as supplemented by letter dated November 17, 2009 (Reference 2), the Tennessee Valley Authority (TVA) submitted a request for amendment to the Technical Specifications (TS) for Browns Ferry Nuclear Plant, Unit 1. The amendment request proposed to add the AREVA NP analysis methodologies to the list of approved methods to be used in determining the core operating limits in the Core Operating Limits Report (COLR). Additional Technical Specification changes are also requested to reflect the AREVA NP specific methods for monitoring and enforcing of the thermal limits. In a letter dated December 23, 2009 (Reference 3), the NRC requested that supplemental information be provided by January 15, 2010. The attachments to this letter provide the TVA responses to the NRC request for supplemental information.

Attachment 1 to this letter contains information that AREVA NP considers to be proprietary in nature and subsequently, pursuant to 10 CFR 2.390, "Public inspections, exemptions, requests for withholding," paragraph (a)(4), it is requested that such information be withheld from public disclosure. Attachment 7 to this letter provides the affidavit supporting this request. Attachment 2 to this letter contains the redacted version of the proprietary attachment with the proprietary material removed, which is suitable for public disclosure.

Attachments 3 and 5 to this letter contain information that Global Nuclear Fuel – Americas considers to be proprietary in nature and subsequently, pursuant to 10 CFR 2.390 paragraph (a)(4), it is requested that such information be withheld from public disclosure. Attachment 8 to this letter provides the affidavits supporting this request. Attachments 4 and 6 to this letter contain the redacted versions of the proprietary attachments with the proprietary material removed, which are suitable for public disclosure.

TVA has determined that the supplemental information provided by this letter does not affect the no significant hazards considerations associated with the proposed TS changes provided in the Reference 1 and Reference 2 letters. The proposed TS changes still qualify for a categorical exclusion from environmental review pursuant to the provisions of 10 CFR 51.22(c)(9). Additionally, in accordance with 10 CFR 50.91(b)(1), TVA is sending a copy of this letter and the non-proprietary attachments to the Alabama State Department of Public Health.

There are no regulatory commitments in this submittal.

Please direct any questions concerning this matter to Dan Green at (423) 751-8423.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on the 15th day of January 2010.

Respectfully,



R. M. Krich
Vice President
Nuclear Licensing

Attachments:

1. Response to NRC Request for Supplemental Information Regarding Technical Specification Change TS-467 - Utilization of AREVA Fuel and Associated Analysis Methodologies (Proprietary)
2. Response to NRC Request for Supplemental Information Regarding Technical Specification Change TS-467 - Utilization of AREVA Fuel and Associated Analysis Methodologies (Non-Proprietary)
3. Browns Ferry Nuclear Plant Units 1, 2 and 3 SAFER/GESTR-LOCA Loss-of-Coolant Accident Analysis (Proprietary)
4. Browns Ferry Nuclear Plant Units 1, 2 and 3 SAFER/GESTR-LOCA Loss-of-Coolant Accident Analysis (Non-Proprietary)
5. GE14 Fuel Thermal Mechanical Information (Proprietary)
6. GE14 Fuel Thermal Mechanical Information (Non-Proprietary)
7. AREVA NP Affidavit
8. Global Nuclear Fuel – Americas Affidavits

cc (Attachments):

NRC Regional Administrator - Region II
NRC Senior Resident Inspector - Browns Ferry Nuclear Plant
State Health Officer, Alabama State Department of Public Health

ATTACHMENT 7

**Browns Ferry Nuclear Plant (BFN)
Unit 1**

**Response to NRC Request for Supplemental Information Regarding
Technical Specification Change TS-467 - Utilization of AREVA Fuel and Associated
Analysis Methodologies**

AREVA NP Affidavit

Attached is the AREVA NP affidavit supporting the request to withhold proprietary information (included in Attachment 1) from the public.

in accordance with 10 CFR 2.390. The information for which withholding from disclosure is requested qualifies under 10 CFR 2.390(a)(4) "Trade secrets and commercial or financial information."

6. The following criteria are customarily applied by AREVA NP to determine whether information should be classified as proprietary:

- (a) The information reveals details of AREVA NP's research and development plans and programs or their results.
- (b) Use of the information by a competitor would permit the competitor to significantly reduce its expenditures, in time or resources, to design, produce, or market a similar product or service.
- (c) The information includes test data or analytical techniques concerning a process, methodology, or component, the application of which results in a competitive advantage for AREVA NP.
- (d) The information reveals certain distinguishing aspects of a process, methodology, or component, the exclusive use of which provides a competitive advantage for AREVA NP in product optimization or marketability.
- (e) The information is vital to a competitive advantage held by AREVA NP, would be helpful to competitors to AREVA NP, and would likely cause substantial harm to the competitive position of AREVA NP.

The information in the Document is considered proprietary for the reasons set forth in paragraphs 6(b), 6(d) and 6(e) above.

7. In accordance with AREVA NP's policies governing the protection and control of information, proprietary information contained in this Document have been made available, on a limited basis, to others outside AREVA NP only as required and under suitable agreement providing for nondisclosure and limited use of the information.

8. AREVA NP policy requires that proprietary information be kept in a secured file or area and distributed on a need-to-know basis.

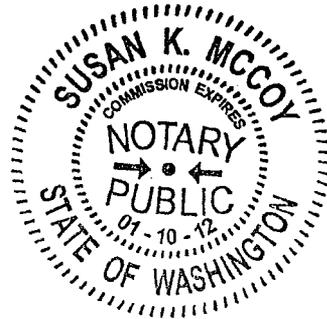
9. The foregoing statements are true and correct to the best of my knowledge, information, and belief.

[Handwritten Signature]

SUBSCRIBED before me this 15th
day of January, 2010.

[Handwritten Signature]

Susan K. McCoy
NOTARY PUBLIC, STATE OF WASHINGTON
MY COMMISSION EXPIRES: 1/10/12



ATTACHMENT 8

**Browns Ferry Nuclear Plant (BFN)
Unit 1**

**Response to NRC Request for Supplemental Information Regarding
Technical Specification Change TS-467 - Utilization of AREVA Fuel and Associated
Analysis Methodologies**

Global Nuclear Fuel – Americas Affidavits

Attached are the Global Nuclear Fuel – Americas affidavits supporting the request to withhold proprietary information (included in Attachments 3 and 5) from the public.

GE-Hitachi Nuclear Energy Americas LLC

AFFIDAVIT

I, **James F. Harrison**, state as follows:

- (1) I am Vice President Fuel Licensing, GE-Hitachi Nuclear Energy Americas LLC (“GEH”), and have been delegated the function 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 GEH proprietary report, NEDC-32484P, *Browns Ferry Nuclear Plant Units 1, 2 and 3, SAFER/GESTR-LOCA Loss-Of-Coolant Accident Analysis*, Class III (GEH Proprietary Information), Revision 7, January 2010. GEH text proprietary information is identified by a dark red dotted underline inside double square brackets [[This sentence is an example.¹³¹]]. Figures and large equation objects containing GEH proprietary information are identified with double square brackets before and after the object. In each case, the superscript notation ¹³¹ refers to Paragraph (3) of this affidavit, which provides the basis for the proprietary determination.
- (3) In making this application for withholding of proprietary information of which it is the owner or licensee, GEH 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 qualify 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, 975F2d871 (DC Cir. 1992), and Public Citizen Health Research Group v. FDA, 704F2d1280 (DC Cir. 1983).
- (4) Some examples of categories of information which 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 GEH's competitors without license from GEH constitutes a competitive economic advantage over other companies;
 - b. Information which, if used by a competitor, would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing of a similar product;
 - c. Information which reveals aspects of past, present, or future GEH customer-funded development plans and programs, resulting in potential products to GEH;
 - d. Information which discloses patentable subject matter for which it may be desirable to obtain patent protection.

The information sought to be withheld is considered to be proprietary for the reasons set forth in paragraphs (4)a. and (4)b. above.

- (5) To address 10 CFR 2.390(b)(4), the information sought to be withheld is being submitted to NRC in confidence. The information is of a sort customarily held in confidence by GEH, 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 GEH, no public disclosure has been made, and it is not available in public sources. All disclosures to third parties, including any required transmittals to NRC, have been made, or must be made, pursuant to regulatory provisions or proprietary agreements which provide for maintenance of the information in confidence. Its initial designation as proprietary information, and the subsequent steps taken to prevent its unauthorized disclosure, are as set forth in paragraphs (6) and (7) following.
- (6) Initial approval of proprietary treatment of a document is made by the manager of the originating component, the person most likely to be acquainted with the value and sensitivity of the information in relation to industry knowledge, or subject to the terms under which it was licensed to GEH. Access to such documents within GEH is limited on a "need to know" basis.
- (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 GEH are limited to regulatory bodies, customers, and potential customers, and their agents, suppliers, and licensees, and others with a legitimate need for the information, and then only in accordance with appropriate regulatory provisions or proprietary agreements.
- (8) The information identified in paragraph (2), above, is classified as proprietary because it contains detailed information regarding the processes and methodology for application of SAFER/GESTR-LOCA to the performance of evaluations of LOCA events for BWRs. The development, testing and documentation of the SAFER/GESTR-LOCA methodology was achieved at a significant cost to GEH.

The development of the SAFER/GESTR-LOCA methodology along with the interpretation and application of the analytical results is derived from the extensive experience database that constitutes a major GEH asset.

- (9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to GEH's competitive position and foreclose or reduce the availability of profit-making opportunities. The information is part of GEH's comprehensive BWR safety and technology base, and its commercial value extends beyond the original development cost. The value of the technology base goes beyond the extensive physical database and analytical methodology and includes development of the expertise to determine and apply the appropriate evaluation process. In addition, the technology base includes the value derived from providing analyses done with NRC-approved methods.

The research, development, engineering, analytical and NRC review costs comprise a substantial investment of time and money by GEH.

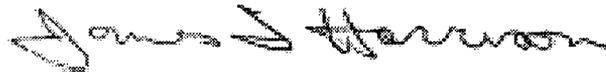
The precise value of the expertise to devise an evaluation process and apply the correct analytical methodology is difficult to quantify, but it clearly is substantial.

GEH's competitive advantage will be lost if its competitors are able to use the results of the GEH experience to normalize or verify their own process or if they are able to claim an equivalent understanding by demonstrating that they can arrive at the same or similar conclusions.

The value of this information to GEH would be lost if the information were disclosed to the public. Making such information available to competitors without their having been required to undertake a similar expenditure of resources would unfairly provide competitors with a windfall, and deprive GEH of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing and obtaining these very valuable analytical tools.

I declare under penalty of perjury that the foregoing affidavit and the matters stated therein are true and correct to the best of my knowledge, information, and belief.

Executed on this 7th day of January 2010.



James F. Harrison
Vice President Fuel Licensing
GE-Hitachi Nuclear Energy Americas LLC

Global Nuclear Fuel–Americas, LLC
Affidavit

I, Andrew A. Lingenfelter, state as follows:

- (1) I am Vice President, Fuel Engineering, Global Nuclear Fuel – Americas, LLC (“GNF-A”), and have been delegated the function 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 GNF report, GNF 0000-0111-8036-R0-P, *GE14 Fuel Thermal-Mechanical Information*, Class III, GNF Proprietary Information, dated January 2010. GNF-A proprietary text in GNF 0000-0111-8036-R0-P is identified by ~~[[a dotted underline inside double square brackets^{3}]]~~. Figures and other large objects are identified with double square brackets before and after the object. In each case, the superscript notation {3} refers to Paragraph (3) of this affidavit, which provides the basis for the proprietary determination.
- (3) In making this application for withholding of proprietary information of which it is the owner, 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 qualify 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, 975F2d871 (DC Cir. 1992), and Public Citizen Health Research Group v. FDA, 704F2d1280 (DC Cir. 1983).
- (4) Some examples of categories of information which 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 other companies;
 - b. Information which, if used by a competitor, would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing of a similar product;
 - c. Information which reveals cost or price information, production capacities, budget levels, or commercial strategies of GNF-A, its customers, or its suppliers;
 - d. Information which reveals aspects of past, present, or future GNF-A customer-funded development plans and programs, of potential commercial value to GNF-A;

- e. Information which discloses patentable subject matter for which it may be desirable to obtain patent protection.

The information sought to be withheld is considered to be proprietary for the reasons set forth in paragraphs (4)a. and (4)b., above.

- (5) To address the 10 CFR 2.390 (b) (4), the information sought to be withheld is being submitted to NRC in confidence. The information is of a sort customarily held in confidence by GNF-A, and is in fact so held. Its initial designation as proprietary information, and the subsequent steps taken to prevent its unauthorized disclosure, are as set forth in (6) and (7) following. The information sought to be withheld has, to the best of my knowledge and belief, consistently been held in confidence by GNF-A, no public disclosure has been made, and it is not available in public sources. All disclosures to third parties including any required transmittals to NRC, have been made, or must be made, pursuant to regulatory provisions or proprietary agreements which provide for maintenance of the information in confidence.
- (6) Initial approval of proprietary treatment of a document is made by the manager of the originating component, the person most likely to be acquainted with the value and sensitivity of the information in relation to industry knowledge, or subject to the terms under which it was licensed to GNF-A. Access to such documents within GNF-A is limited on a "need to know" basis.
- (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, by the manager of the cognizant marketing function (or his delegate), and by the Legal Operation, 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 others with a legitimate need for the information, and then only in accordance with appropriate regulatory provisions or proprietary agreements.
- (8) The information identified in paragraph (2) is classified as proprietary because it contains details of GNF-A's fuel design and licensing methodology.

The development of the fuel design methods, model qualification, and licensing, along with the testing, development and approval of the supporting methodology was achieved at a significant cost to GNF-A or its licensor.

- (9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to GNF-A's competitive position and foreclose or reduce the availability of profit-making opportunities. The fuel design and licensing methodology is part of GNF-A's comprehensive BWR safety and technology base, and its commercial value extends beyond the original development cost. The value of the technology base goes beyond the extensive physical database and analytical methodology and includes development of the expertise to determine and apply the appropriate evaluation process. In addition, the technology base includes the value derived from providing analyses done with NRC-approved methods.

The research, development, engineering, analytical, and NRC review costs comprise a substantial investment of time and money by GNF-A or its licensor.

The precise value of the expertise to devise an evaluation process and apply the correct analytical methodology is difficult to quantify, but it clearly is substantial.

GNF-A's competitive advantage will be lost if its competitors are able to use the results of the GNF-A experience to normalize or verify their own process or if they are able to claim an equivalent understanding by demonstrating that they can arrive at the same or similar conclusions.

The value of this information to GNF-A would be lost if the information were disclosed to the public. Making such information available to competitors without their having been required to undertake a similar expenditure of resources would unfairly provide competitors with a windfall, and deprive GNF-A of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing and obtaining these very valuable analytical tools.

I declare under penalty of perjury that the foregoing affidavit and the matters stated therein are true and correct to the best of my knowledge, information, and belief.

Executed at Wilmington, North Carolina this 7th day of January 2010.



Andrew A. Lingenfelter
Vice President, Fuel Engineering
Global Nuclear Fuel-Americas, LLC