



Tennessee Valley Authority, Post Office Box 2000, Decatur, Alabama 35609-2000

February 7, 1997

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

Gentlemen:

In the Matter of)	Docket Nos. 50-259
Tennessee Valley Authority)	50-260
		50-296

**BROWNS FERRY NUCLEAR PLANT (BFN) - UNITS 1, 2, AND 3 -
TECHNICAL SPECIFICATIONS (TS) CHANGE 377 - CHANGE IN SAFETY
LIMIT MINIMUM CRITICAL POWER RATIO (SLMCPR) AND REVISION TO
BASES DESCRIPTION OF RESIDUAL HEAT REMOVAL SUPPLEMENTAL FUEL
POOL COOLING MODE - SUPPLEMENTAL INFORMATION**

This letter provides supplemental information for the review of proposed TS-377 as requested by the NRC staff during a teleconference on January 10, 1997. TVA submitted TS-377 on June 21, 1996. TS-377 proposed to increase the SLMCPR value in TS 1.1.A.1 in response to the General Electric (GE) 10 CFR Part 21 notification submitted to NRC on May 24, 1996, relating to potential non-conservative SLMCPR values resulting from use of generic calculations.

As stated in TS-377, a Unit 2 Cycle 9 specific calculation showed that the SLMCPR was non-conservative with respect to the value currently in TS 1.1.A.1 (1.09 versus 1.07). To account for this deviation, TVA increased the Unit 2 Operating Limit Minimum Critical Power Ratio (OLMCPR) to administratively compensate for the increase in SLMCPR. A Unit 3 Cycle 7 specific calculation showed that the 1.07 SLMCPR in TS continued to be valid. Therefore, no changes in OLMCPR were needed on that unit. In TS-377, TVA requested the SLMCPR be raised to 1.10 for all three BFN TS to provide an updated SLMCPR to bound the Unit 2 Cycle 9 calculation and to provide a higher CPR limit to account for expected variations in SLMCPR in future cycle-specific core reloads.

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During the January 10, 1997, teleconference, NRC staff requested supplemental information for TS-377 regarding 1) cycle specific information used in calculating the SLMCPR for the current core loadings, and 2) methods that will be used in future reload analyses to verify the cycle-specific SLMCPR values. A response to these two requests is below.

1. Cycle-Specific Basis for SLMCPR Values

Response

Enclosed is a letter dated January 28, 1997, prepared for TVA by GE which provides the basis for the cycle-specific derivation of the SLMCPR values for the current Unit 2 Cycle 9 core and the Unit 3 Cycle 8 core which shows the SLMCPR to be 1.09 and 1.10 respectively. Unit 3 Cycle 8 data is provided since Unit 3 will be shutting down in February 1997 for a refueling outage and will restart in Cycle 8.

2. Methodology to be Used for Future Core Reloads to Verify SLMCPR

Response

The methodology used for calculating the cycle-specific SLMCPR is as described in Section 1.1.5 of Amendment 25 to GE Licensing Topical Report NEDE-24011-P-A (GESTAR II) which was submitted to NRC from GE on December 13, 1996. In summary, SLMCPR will be verified by GE for each BFN core reload rather than applying the GESTAR II generic SLMCPR.

Considering TVA's long term core reload objectives and plans, it is expected that calculated cycle-specific SLMCPRs will decline in the future. Therefore, the 1.10 SLMCPR value proposed in TS-377 should remain an upper limit. If, however, future cycle-specific calculations show an increase in SLMCPR, TVA would be obligated to submit TS changes since the SLMCPR limit is a specific TS provision.

Based on the above discussion, SLMCPR values will be addressed appropriately for future core reloads.

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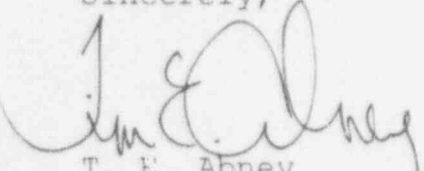
TS-377 also requests that Unit 1 TS be changed to modify the SLMCPR value from 1.07 to 1.10. Unit 1 is currently defueled and TVA does not have a firm schedule for the return of Unit 1 to service. However, as discussed in item 2, the 1.10 SLMCPR value proposed in TS-377 is likely an upper limit which will still apply for future Unit 1 core reloads. Also as discussed in item 2, should the SLMCPR increase above 1.10 for future Unit 1 core reloads, or should TVA desire to lower the Unit 1 SLMCPR TS value based on future cycle-specific calculations, a TS amendment would be required. Therefore, we request that the Unit 1 SLMCPR value be modified to 1.10 as proposed by TS-377.

The enclosure to this letter provides a copy of the GE letter with details of the derivation of the cycle-specific SLMCPRs. This GE letter contains information proprietary to GE, and GE requests that the document be withheld from public disclosure in accordance with 10 CFR 2.790(a)(4). An affidavit supporting this request is provided in accordance with 10 CFR 2.790(b)(1).

TVA has previously requested that the revised TS be made effective for Units 1 and 2 within 30 days of NRC approval. TVA also requested the Unit 3 TS be made effective for Unit 3 during the cycle 7 refueling outage which currently is scheduled to begin on February 21, 1997.

If you have any questions about this change, please contact me at (205)729-2636.

Sincerely,



T. E. Abney
Manager of Licensing
and Industry Affairs

Enclosure
cc: see page 4

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Enclosure

cc (w/o Enclosure):

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ENCLOSURE

TENNESSEE VALLEY AUTHORITY
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1, 2, AND 3

GE LETTER TO TVA DATED, JANUARY 28, 1997,
"BROWNS FERRY UNIT 2 CYCLE 9 & UNIT 3 CYCLE 8 SLMCPR
LICENSING CLARIFICATION -- GE PROPRIETARY INFORMATION"

(SEE ATTACHED)

Affidavit

I, Ralph J. Reda, being duly sworn, depose and state as follows:

- (1) I am Manager, Fuels and Facility Licensing, General Electric Company ("GE") 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 the General Electric letter, B. R. Fischer to J. L. Rash, *Browns Ferry Unit 2 Cycle 9 & Unit 3 Cycle 8 SLMCPR Licensing Clarification Revision 1 — GE Proprietary Information*, January 27, 1997.
- (3) In making this application for withholding of proprietary information of which it is the owner, GE 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 2.790(a)(4) for "trade secrets and commercial or financial information obtained from a person and privileged or confidential" (Exemption 4). The material for which exemption from disclosure is here sought is all "confidential commercial information," and some portions 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 General Electric's competitors without license from General Electric 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 General Electric, its customers, or its suppliers;
 - d. Information which reveals aspects of past, present, or future General Electric customer-funded development plans and programs, of potential commercial value to General Electric;
 - 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 both paragraphs (4)a. and (4)b., above.

- (5) The information sought to be withheld is being submitted to NRC in confidence. The information is of a sort customarily held in confidence by GE, 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 GE, 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. Access to such documents within GE 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 GE 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 would provide other parties, including competitors, with information related to detailed results of analytical models, methods and processes, including computer codes, which GE has developed, requested NRC approval of, and applied to perform evaluations of the BWR. The development of the evaluation process along with the interpretation and application of the analytical results is derived from the extensive experience database that constitutes a major GE asset.
- (9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to GE's competitive position and foreclose or reduce the availability of profit-making opportunities. The fuel design and analytical methodology are part of GE's comprehensive BWR safety and technology base, and their 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 GE.

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.

GE's competitive advantage will be lost if its competitors are able to use the results of the GE 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.

Attachment

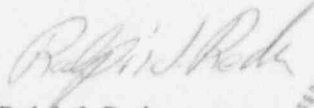
The value of this information to GE would be lost if the information were disclosed to the public. Making such information available to competitors without their having been required to undertake a similar expenditure of resources would unfairly provide competitors with a windfall, and deprive GE of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

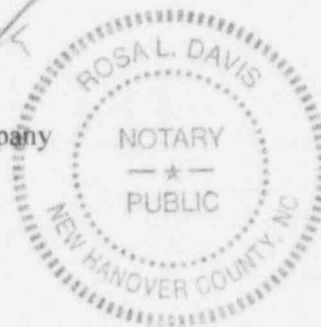
State of North Carolina)
County of New Hanover) SS:

Ralph J. Reda, being duly sworn, deposes and says:

That he has read the foregoing affidavit and the matters stated therein are true and correct to the best of his knowledge, information, and belief.

Executed at Wilmington, North Carolina, this 27 day of January, 1997.


Ralph J. Reda
General Electric Company



Subscribed and sworn before me this 27 day of January, 1997.



My commission expires on 12/14/97
Notary Public, State of North Carolina