

10 CFR 50.90

April 1, 2003  
2130-03-20083

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

Oyster Creek Generating Station  
Facility Operating License No. DPR-16  
NRC Docket No. 50-219

Subject: Supplemental Information - Technical Specification  
Change Request No. 312, Safety Limit Minimum  
Critical Power Ratio (TAC NO. MB6959)

This letter provides supplemental information (Enclosure 1) in response to discussions with the NRC staff via email and a conference call on March 19, 2003 regarding Oyster Creek Technical Specification Change No. Request 312, submitted to NRC for review on December 11, 2002. Enclosure 1 contains information proprietary to Global Nuclear Fuel. Accordingly, it is requested that Enclosure 1 be withheld from public disclosure. An affidavit certifying the basis for this application for withholding as required by 10CFR2.790(b)(1) is also provided as Enclosure 3. Enclosure 2 provides a non-proprietary version of the information contained in Enclosure 1.

No new regulatory commitments are established by this submittal. If any additional information is needed, please contact David Robillard at (609) 971-4793.

I declare under penalty of perjury that the foregoing is true and correct.

Very truly yours,

04-01-03  
Executed On

  
Michael P. Gallagher  
Director, Licensing & Regulatory Affairs  
AmerGen Energy Company, LLC

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Enclosures: (1) Supplemental Information, Proprietary Version  
(2) Supplemental Information, Non-Proprietary Version  
(3) Global Nuclear Fuel Affidavit Certifying Request for Withholding  
from Public Disclosure

cc: H. J. Miller, Administrator, USNRC Region I  
P. S. Tam, USNRC Senior Project Manager, Oyster Creek  
R. J. Summers, USNRC Senior Resident Inspector, Oyster Creek  
File No. 02079

Mr. Kent Tosch, Director  
Bureau of Nuclear Engineering  
Department of Environmental Protection  
CN 415  
Trenton, NJ 08628

The Honorable Louis Amato  
Mayor of Lacey Township  
818 West Lacey Road  
Forked River, NJ 08731

**ENCLOSURE 2**  
**To Letter 2130-03-20083**

**OYSTER CREEK**

**SUPPLEMENTAL INFORMATION**  
**TECHNICAL SPECIFICATION CHANGE REQUEST NO. 312**  
**SAFETY LIMIT MINIMUM CRITICAL POWER RATIO**

**NON-PROPRIETARY**

**REQUEST FOR ADDITIONAL INFORMATION**  
**RELATING TO REQUEST FOR SLMCPR AMENDMENT FOR**  
**OYSTER CREEK, DOCKET NO. 50-219**

1. Please provide uncertainty values for power distribution uncertainties shown in both column 1 and 2 of Table 2 in Enclosure 3. Justify that the proposed reduction of the SLMCPR value is still providing enough margin for Cycle 19 operation with respect to the results shown in Table 4.1 of NEDC-32601P-A. Explain why the reduction in the calculated SLMCPR value due to using the improved/ revised methodology is greater for Oyster Creek, Cycle 19 than the reductions shown in Table 4.1 of NEDC-32601P-A.

RESPONSE

The uncertainty values in Table 2 of Enclosure 3 are the values approved by the NRC. These uncertainties are nominal values expressed as standard deviations corresponding to one-sigma ( $\sigma$ ). In other words, it is expected that 84.1% of a random sample of the population will have a power distribution uncertainty that is less than the mean plus one- $\sigma$  for the simulated normal probability distribution function (PDF) generated using these values. The GETAB power distribution uncertainties have been demonstrated repeatedly to be conservative. They are generically applicable for plants that use the original equipment TIP system and can be applied regardless of the plant monitoring system provided the uncertainty values have been shown to apply for the monitoring system of concern. To assess the amount of conservatism in the generic GETAB value, compare the assumed [[ ]] generic uncertainty in bundle power with the specific reduced bundle power uncertainty value of [[ ]] that has been documented in Table 4.2 of NEDC-32694P-A and has been shown to apply for plants monitored using GNF's 3DM monitoring system.

The calculated SLMCPR value is not intended to be conservative. (However, the plant licensee may choose to specify a conservative SLMCPR value in their Technical Specifications.) The overall conservatism is associated with how the SLMCPR value is defined and calculated. The definition of SLMCPR assures that in the event of the worst-case AOO transient that starts with the core initially operating at the operating limit MCPR that no more than 0.1% of the rods in the core will be susceptible to boiling transition. The approved uncertainty values and the approved calculational process are considered together to obtain a nominal calculated value for the calculated SLMCPR that meets the stated objective of ensuring that no more than 0.1% of the rods in the core will be susceptible to boiling transition.

The approved Monte Carlo process has not changed fundamentally since 1973 when it was originally introduced in GETAB (NEDO-10958-A). A minor revision to address unintended excessive conservatism in the calculational simulation was reviewed and approved by the NRC in 1999 and is documented in NEDC-32601P-A. This methodology is referred to by GNF as the "revised methodology". The minor change in the calculational process is documented on pages 4-2, 4-7, A-34, and B-13 of NEDC-32601P-A. The specific change was reviewed and approved by the NRC as indicated specifically on pages 10 and 11 of the NRC SER dated March 11, 1999. The revised

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methodology can be applied regardless of the plant monitoring system since like the original GETAB methodology, it does not make assumptions that are specific to unique plant monitoring features such as shape adaption. The only qualification is that the input uncertainties be shown to applicable for the monitoring system that is used. The change in the calculated SLMCPR values for the revised methodology in comparison to the values calculated using the original GETAB methodology are shown for some particular cases in Table 4.1 of NEDC-32601P-A. The average reduction in the calculated SLMCPR [[

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[[ GNF Proprietary Information ]]  
[[ removed between double brackets ]]

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**2. Provide the relationship between the calculated SLMCPR and the power distribution uncertainty methodology and values that were used. Explain how these influenced the calculated SLMCPR.**

RESPONSE

[[

]] The calculated value from the approved Monte Carlo process using the revised methodology and the GETAB uncertainties is  $1.090 \pm 0.005$ . The agreement is outstanding; confirming, that the 1.09 SLMCPR value requested for the Technical Specifications is appropriate.

**3. On page 2.1-3 of the requested change, please identify the Reference 1 revision number, and also clarify that the latest approved version of NEDE-24011-P-A includes References 2, 3, and 4. Justify the duplication for this requested change.**

RESPONSE

The latest version of GESTAR II is revision 14 dated June 2000. The appropriate revision is cited as Reference 1 on page 2.1-3 of the requested change. References 2, 3 and 4 on page 2.1-3 are already cited in revision 14 of GESTAR II.

[[ GNF Proprietary Information ]]  
[[ removed between double brackets ]]

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**ENCLOSURE 3**  
**To Letter 2130-03-20083**

**OYSTER CREEK**

**GLOBAL NUCLEAR FUEL AFFIDAVIT CERTIFYING REQUEST  
FOR WITHHOLDING FROM PUBLIC DISCLOSURE**



**Global Nuclear Fuel**

A Joint Venture of GE, Toshiba, & Hitachi

## Affidavit

I, Jens G. Andersen, state as follows:

- (1) I am Fellow and project manager, TRACG Development, Global Nuclear Fuel – Americas, L.L.C. (“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 the attachment, “REQUEST FOR ADDITIONAL INFORMATION RELATING TO REQUEST FOR SLMCPR AMENDMENT FOR OYSTER CREEK, DOCKET NO. 50-219”, March 19, 2003.
- (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 2.790(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 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.

Affidavit

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) 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 methods used in these analyses, along with the testing, development and approval of the supporting methodology was achieved at a significant cost, on the order of several million dollars, 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.

Affidavit

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 25th day of March 2003.



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Jens G. Andersen  
Global Nuclear Fuel – Americas, LLC