



**Global Nuclear Fuel**

**Glen A. Watford**  
Manager, Nuclear Fuel Engineering

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A Joint Venture of GE, Toshiba, & Hitachi

Global Nuclear Fuel - Americas, LLC  
Castle Hayne Road, Wilmington, NC 28401  
(910) 675-5446, Fax (910) 675-5684  
Glen.Watford@gnf.com

Document Control Desk  
US Nuclear Regulatory Commission  
Washington, DC 20555

Attention: R. M. Pulsifer

Subject: **TRANSMITTAL OF ADDITIONAL RESPONSE TO NRC "REQUEST FOR  
ADDITIONAL INFORMATION FOR TOPICAL REPORT NEDC-32981-P,  
'GEXL96 CORRELATION FOR ATRIUM-9B FUEL' (TAC NO. MB0183)"**

Reference: 1. NEDC-32981P, Revision 0, "GEXL96 Correlation for ATRIUM-9B Fuel,"  
September 2000.

2. Letter, A. Giancattarino (Exelon) to T. Orr (GNF-A), "Statement on Use  
of ANFB to Support GEXL96 Development," NFM:MW:01-141, May 8,  
2001.

This letter transmits an additional response (Reference 2) to the NRC request for additional  
information regarding the GEXL96 correlation development associated with ATRIUM-9B  
fuel.

If you have any questions, please call me at 910-675-5446.

Sincerely,

Glen A. Watford, Manager  
Fuel Engineering Services  
(910) 675-5446

cc: R. Caruso (NRC)  
T. Huang (NRC)  
R. Chin (Exelon)  
attachment

*ADD: Bob Pulsifer  
to ERID  
T010*

Exelon Corporation  
P.O. Box 805379  
Chicago, IL 60680-5379

www.exeloncorp.com

DG01-0003

May 8, 2001  
NFM:MW:01-141

Tammy Orr  
Fuel Account Manager-Exelon  
Castle Hayne Road  
Global Nuclear Fuel  
Wilmington, NC 28401

**Subject:** Statement on Use of ANFB to Support GEXL96 Development

**Reference:** NRC/GNF/Exelon Telecon of May 2, 2001

During the referenced telecon, the NRC and their consultant requested a statement relative to confirmation that the appropriate FANP critical power correlation was used to supply GNF with ATRIUM9B critical power correlation information. Attached is the statement which should be forwarded to Jens Anderson for GNF transmittal to the Staff

Please contact Mr. A. S. Pallotta (630-663-3021) with any questions or comments.



Anthony D. Giancattarino  
BWR Design  
Nuclear Fuel Management  
ATRIUM 9B NRC response.doc

**Attachment:** Statement on Use of ANFB to Support GEXL96 Development

cc: R. Fawcett  
R. J. Chin  
GNF GEXL 96 File

Attachment  
Statement on Use of ANFB to Support GEXL96 Development

References:

1. ANFB Critical Power Correlation ANF-1125 (P) (A), ANF-1125 (P) (A) Supplement 1, ANF-1125 (P) (A) Supplement 2, April 1990
2. ANFB Critical Power Correlation Determination of ATRIUM 9B Additive Constant Uncertainties, ANF-1125 (P) (A) Supplement 1 Appendix E Revision 0, September 1998.
3. Advanced Nuclear Fuels Methodology for Boiling Water Reactors, Benchmark Results for the CASMO-3G/MICROBURN-B Calculation Methodology, XN-NF-80-19(P) (A) Volume 1 Supplement 3, Supplement 3 Appendix F, and Supplement 4, Advanced Nuclear Fuels Corporation, November 1990.
4. Exelon Internal Calculation Note BNDG:00-002 - ATRIUM 9B ANFB CPR Calculations for GNF Use in Applying GEXL to SPC Fuel, dated 5/25/2000.
5. Exelon Internal Calculation Note BNDG:00-005 - ATRIUM 9B ANFB CPR Calculations for GNF Use in Applying GEXL to SPC Fuel, dated 6/01/2000.

The FANP (i.e. SPC) ANFB critical power correlation (as described in Reference 1) and associated ANFB additive constants (as described in Reference 2) were used to calculate CPR information for ATRIUM 9B fuel. To facilitate the performance of these ANFB critical power calculations, the 3D simulator code MICROBURN-B (Reference 3) was used to exercise the FANP Reference 1 ANFB critical power correlation to obtain "simulated measured critical power data" (i.e. ANFB critical power correlation has been incorporated in MICROBURN-B by FANP since the early 1990s). This information served as the equivalent of a measured critical power database for development of the GEXL96 critical power correlation for FANP ATRIUM 9B fuel. Confirmation that the ANFB correlation in Reference 1 and associated ATRIUM 9B ANFB additive constants (as described in Reference 2) were correctly applied in generation of the CPR data is contained in References 4 and 5.