

SIEMENS

February 24, 1997
HDC:97:019

Document Control Desk
ATTN: Chief, Planning, Program and Management Support Branch
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

ATRIUM™-10* Irradiation Growth Evaluation

- Ref. 1: EMF-89-98(P)(A), Revision 1 and Supplement 1, "Generic Mechanical Design Criteria for BWR Fuel Designs," Advanced Nuclear Fuels Corporation, May 1995.
2. EMF-95-52(P), Revision 0, "Mechanical Design Evaluation for Siemens Power Corporation ATRIUM™-10 BWR Reload Fuel," Siemens Power Corporation, July 1995.

The Reference 1 topical report described the generic criteria that are to be used on BWR future designs. A requirement noted in this report was that a description of the new design be provided to the NRC. Reference 2, originally transmitted to the NRC in July 1995, provides that description. Reference 1 (Section 2.6, Technical Evaluation Report) also requires that "Those parameters that demonstrate applicability of an existing axial growth to a new design application should be provided to NRC for information in the design conformance document...If it is determined that the currently approved axial growth models are not applicable due to a particular design change, a revised growth model must be submitted to the NRC for review."

Because of the design of the ATRIUM-10, tie rods no longer determine the assembly irradiation growth. Therefore, the attachment to this letter is being submitted to the NRC for review in compliance with Reference 1. The attachment includes a description of the ATRIUM-10 growth evaluation and the growth correlations used in this evaluation. The fuel rod growth model is unchanged and continues to be applicable, as described in the attachment. The assembly growth is determined using the channel growth data to establish the correlation. The data and the resulting correlation curves are presented in the attachment. As noted in discussions with Dr. Wu and Mr. Beyer in Richland on February 20, 1997, SPC will resubmit the correlation for review and approval, if the correlation predictions change more than one standard deviation from those shown on the curve in the figure in the attachment due to the inclusion of new data in the correlation. Otherwise, the justification for application will continue to be submitted for each new fuel design as required by the Reference 1 topical report.

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* ATRIUM is a trademark of Siemens.



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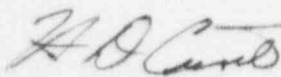
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Siemens Power Corporation considers the information to be submitted in the attachment to be proprietary. In accordance with the requirements of 10 CFR 2.790(b), an affidavit is attached to support the withholding of this attachment from public disclosure.

If you have any questions, please call me at (509) 375-8563.

Very truly yours,



H. Donald Curet, Manager
Product Licensing

/smg

Attachments

cc: Mr. S. M. Matthews (USNRC) MS O-9 D4
Mr. L. E. Phillips (USNRC) MS O-8 E23
Dr. S. L. Wu (USNRC) MS O-8 E23
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