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ComEd

May 2, 1997

JSPLTR 97-0091

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

Subject: Dresden Nuclear Power Station Unit 3 Cycle 15
Confirmation of Minimum Critical Power Ratio Safety Limit
Based on Revised Additive Constant Uncertainties
Operating License DPR-25
Technical Specifications
NRC Docket No. 50-249.

References:

1. Siemens Power Corporation document, *ANFB Critical Power Correlation Uncertainty for Limited Data Sets*, ANF-1125(P), Supplement 1, Appendix D, Siemens Power Corporation - Nuclear Division, April 1997, Submitted to the NRC by SPC letter, "Request for Review of ANFB Critical Power Correlation Uncertainty for Limited Data Sets, ANF-1125(P), Supplement 1, Appendix D", HDC:97:032, H. D. Curet to Document Control Desk, April 18, 1997.

2. Siemens Power Corporation letter, "Interim Use of Increased ANFB Additive Constant Uncertainty", HDC:97:033, H.D. Curet to Document Control Desk, April 18, 1997.

3. ComEd letter, "Quad Cities Nuclear Power Station Units 1 and 2 Exigent Application for Amendment Request to Facility Operating Licenses Pursuant To 10CFR50.91(a)(6), DPR-29 and DPR-30, Technical Specification Changes for Revised Minimum Critical Power Ratio Safety Limit for Quad Cities Unit 2 Cycle 15, Docket Nos. 50-254 and 50-265", ESK-97-089, E.S. Kraft to USNRC, April 21, 1997.

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During a recent U.S. Nuclear Regulatory Commission (NRC) vendor performance inspection review at Siemens Power Corporation (SPC), the NRC reviewers concluded that the range of critical power dryout conditions tested for the 9x9 fuel designs with an internal water channel is insufficient to justify the Additive Constant uncertainty values used in Minimum Critical Power Ratio (MCPR) Safety Limit Determinations. SPC has expanded the number of data points used to calculate the additive constant uncertainty for the ATRIUM-9B fuel design by including additional data sets which have full length rods, 9x9 designs, and inner water channels. Statistical analyses were used to determine a new ATRIUM-9B additive constant uncertainty from this expanded data set. The expanded data base and the statistical analyses performed to determine the new additive constant uncertainty are described in Reference 1.

ComEd has reviewed and accepted Reference 1 and believes that the ATRIUM-9B additive constant uncertainty calculated in Reference 1 is appropriate and conservative. Because the NRC Staff is in the process of reviewing the Reference 1 submittal, SPC conservatively applied a factor of two to the increase in the additive constant uncertainty for the ATRIUM-9B design. This ATRIUM-9B fuel additive constant uncertainty, as described in Reference 2 and utilized for the Reference 3 submittal, was also utilized for the Dresden Unit 3 Cycle 15 MCPR Safety Limit calculation. The actual value of the ATRIUM-9B additive constant uncertainty for the Dresden Unit 3 Cycle 15 MCPR Safety Limit calculation increased from 0.01 to 0.029. The MCPR Safety Limit that is supported for Dresden Unit 3 Cycle 15, using the interim conservative additive constant uncertainty (0.029), is 1.08 for two-loop operation and 1.09 for single-loop operation. This approach to calculating the additive constant uncertainty (doubling the increase) is a conservatism with which the plant will operate until the NRC approval of Reference 1. This interim approach was discussed in an April 3, 1997 meeting between ComEd, Siemens Power Corporation, and NRC Staff.

The MCPR Safety Limit for Dresden Unit 3 Cycle 15, calculated with the conservative additive constant uncertainty of 0.029, is the same as the MCPR Safety Limit in the Technical Specifications (1.08 for two-loop operation with a 0.01 MCPR Safety Limit adder for single-loop operation). Therefore, no change to the MCPR Safety Limit for Dresden Unit 3 Cycle 15 is required and hence no Technical Specification change is necessary.

Upon NRC Staff review and approval of Reference 1, Dresden Station will utilize the additive constant uncertainty in Reference 1 for ATRIUM-9B fuel in the calculation of the MCPR Safety Limit. The interim approach of doubling the increase in the ATRIUM-9B additive constant uncertainty for the MCPR Safety Limit calculation (Reference 2) will no longer be necessary. The ATRIUM-9B additive constant uncertainty calculated in Reference 1 will then be directly used to determine the MCPR Safety Limit.

Please direct any questions you may have concerning this letter to Frank Spangenberg at 815-942-2920, extension 3800.

Sincerely,

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