

Commonwealth Edison Company
Dresden Generating Station
6500 North Dresden Road
Morris, IL 60450
Tel 815-942-2920



April 3, 1998

JMHLTR: 98-0102

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Subject: Additional Information Regarding Dresden Nuclear Power Station Unit 2 Exigent Amendment Request to Facility Operating License DPR-19, Technical Specification Submittal for Dresden Unit 2 Cycle 16
NRC Docket No. 50-237

- References:
1. "Dresden Nuclear Power Station Unit 2 Exigent Amendment Request to Facility Operating License, DPR-19, Technical Specification Submittal for Dresden Unit 2 Cycle 16, Docket No. 50-237", J. M. Heffley to U.S. NRC Document Control Desk, dated March 19, 1998.
 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. "New ANFB Additive Constants for ATRIUM 9B Fuel Design", J. F. Mallay to U. S. NRC Document Control Desk, dated March 24, 1998, NRC:98:017.
 4. April 3, 1998 8:00 AM CST Telecon between ComEd and the NRC.
 5. Advanced Nuclear Fuels Corporation Critical Power Methodology for Boiling Water Reactors / Advanced Nuclear Fuels Corporation Critical Power Methodology for Boiling Water Reactors, Methodology for Analysis of Assembly Channel Bowing Effects / NRC Correspondence, ANF-524(P)(A) Revision 2, Supplement 1, Revision 2, Supplement 2, Advanced Nuclear Fuels Corporation, Richland, WA 99352, November 1990.

The Reference 1 Dresden Unit 2 Cycle 16 (D2C16) exigent amendment requested the D2C16 MCPR Safety Limit be increased to 1.09. To support the requested increase in the MCPR Safety Limit, Reference 1 also indicated that 0.0781% of the rods in the core are predicted to experience transition boiling (which is less than the allowable value of 0.1%). This information is based upon the use of an interim 0.029 additive constant uncertainty for the ATRIUM 9B fuel in D2C16 (References 2 and 3).

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During the Reference 4 telecon, the NRC relayed concerns that the 0.029 ATRIUM 9B interim additive constant uncertainty may not be appropriate in light of Siemens Power Corporation recent ATRIUM 9B dryout testing and the potential for higher uncertainties for fuel rods having local peaking factors above 1.20.

To address specific NRC concerns for D2C16, MCPR Safety Limit calculations were re-performed following the Reference 5 NRC approved methodology with a higher additive constant uncertainty of 0.030 applied to all ATRIUM 9B rods in the core. The results of these analyses indicate that with this higher uncertainty, 0.0863% of the rods in the D2C16 core are predicted to experience transition boiling. The value of 0.0863% (resulting from an increased additive constant uncertainty of 0.030) still remains less than the allowable value of 0.1% rods in the core experiencing transition boiling. The difference between 0.0863% and 0.1% provides extra margin to accommodate ATRIUM 9B additive constant uncertainties greater than 0.030.

Any questions related to this matter should be addressed to Frank Spangenberg, Regulatory Assurance Manager at (815) 942-2920, extension 3800.

Sincerely,


J. M. Heffley
Dresden Site-Vice President

cc: A. Bill Beach, Regional Administrator - Region III
K. Reimer, NRC Resident Inspector - Dresden
L. W. Rossbach, Project Manager - NRR (Dresden Unit 2/3)
Office of Nuclear Facility Safety - IDNS