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March 24, 2003

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Subject: Duke Energy Corporation
Oconee Nuclear Station, Units 1, 2, and 3
Docket Numbers 50-269, 50-270, and 50-287

Request to Add NRC Approved LOCA Methodology to
Core Operating Limits Report (COLR)

Pursuant to the NRC Licensing Topical Report Program, Duke Energy Corporation (Duke) herein requests NRC approval for a change to the Oconee Core Operating Limits Report (COLR). The proposed change will add NRC approved topical report BAW-10164P-A, Revision 4¹ to the COLR listing of analytical methods used to determine core operating limits.

The listing of analytical methodologies in Oconee's Technical Specifications and COLRs include topical report BAW-10192P-A². That topical report references the use of BAW-10164, Revision 3, for LOCA evaluations using the RELAP5/Mod2-B&W code. The NRC Safety Evaluation Report for topical report BAW-10164P-A, Revision 4, recognizes that future loss of coolant (LOCA) analyses using the LOCA evaluation models in BAW-10192P-A would use BAW-10164P-A, Revision 4.

Approval of this request will resolve this administrative discrepancy and enable Duke to use topical report BAW-10164P-A, Revision 4, in conjunction with topical report

¹BAW-10164P-A, Revision 4, "RELAP5/Mod2-B&W, An Advanced Computer Program for Light Water Reactor LOCA and Non-LOCA Transient Analyses," NRC Safety Evaluation dated April 9, 2002

²BAW-10192P-A, Revision 0, "BWNT LOCA - BWNT Loss of Coolant Accident Evaluation Model for Once-Through Steam Generator Plants," NRC Safety Evaluation Dated February 18, 1997

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BAW-10192P-A, Revision 0, until such time as topical report BAW-10192P-A is updated to reference BAW-10164P-A, Revision 4.

Duke's evaluation of topical report BAW-10164P-A, Revision 4, and the associated NRC Safety Evaluation Report, has concluded that BAW-10164P-A, Revision 4, is applicable to the Oconee Nuclear Station. Duke will use the RELAP5/Mod 2-B&W computer code consistent with BAW-10164P-A, Revision 4, and the associated NRC Safety Evaluation Report.

An attachment provides a mark-up of the affected COLR page for Oconee Unit 1 illustrating the manner in which Duke intends to revise the Oconee Unit 1, 2, and 3 COLRs to include NRC approved topical report BAW-10164P-A, Rev 4.

Implementation of this amendment will not impact the Oconee Updated Final Safety Analysis Report (UFSAR). Duke requests approval of the proposed change by September 1, 2003 to support the Oconee Unit 1 start-up in November of 2003. This schedule and the approach described herein are consistent with the February 13, 2003 teleconference between Duke and the NRC Staff.

Inquiries on this matter should be directed to J. A. Effinger at (704) 382-8688.

Very truly yours,



W. R. Mc Collum, Jr.
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ATTACHMENT

OCONEE UNIT 1 CORE OPERATING LIMITS REPORT

MARKED COPY

Oconee 1 Cycle

1.0 Error Adjusted Core Operating Limits

The Core Operating Limits Report for O1C has been prepared in accordance with the requirements of ITS 5 6.5. The core operating limits within this report have been developed using NRC approved methodology identified in references 1 through 10. The RPS protective limits and maximum allowable setpoints are documented in references 11 through 13. These limits are validated for use in O1C by references 14 through 16. The O1C analyses assume a design flow of 107.5% of 88,000 gpm per RCS pump, radial local peaking ($F_{\Delta h}$) of 1.714, and axial peaking factor (F_z) of 1.5, and an EOC (< 100 ppmB) Tavg reduction of up to 10° F provided 4 RCPs are in operation and Tavg does not decrease below 569 °F.

The error adjusted core operating limits included in section 1 of the report incorporate all necessary uncertainties and margins required for operation of the O1C reload core.

1.1 References

1. Nuclear Design Methodology Using CASMO-3 / SIMULATE-3P, DPC-NE-1004P-A, Revision 0, SER dated November 23, 1992.
2. Oconee Nuclear Station Reload Design Methodology II, DPC-NE-1002A, Revision 1, SER dated October 1, 1985.
3. Oconee Nuclear Station Reload Design Methodology, NFS-1001A, Revision 4, SER dated July 29, 1981.
4. ONS Core Thermal Hydraulic Methodology Using VIPRE-01, DPC-NE-2003P-A, SER dated July 19, 1989.
5. Thermal Hydraulic Statistical Core Design Methodology, DPC-NE-2005P-A, Revision 2, SER dated June 8, 1999.
6. Fuel Mechanical Reload Analysis Methodology Using TACO3, DPC-NE-2008P-A, SER dated April 3, 1995.
7. UFSAR Chapter 15 Transient Analysis Methodology, DPC-NE-3005-PA, Revision 1, SER dated May 25, 1999.
8. DPC-NE-3000P-A, Thermal Hydraulic Transient Analysis Methodology, Rev. 2, SER dated October 14, 1998.
9. BAW-10192-PA, BWNT LOCA - BWNT Loss of Coolant Accident Evaluation Model for Once-Through Steam Generator Plants, SER dated February 18, 1997.
Includes updated referenced topical report: BAW-10164P-A, Rev 4
"RELAP5/MOD2-B&W - An Advanced Computer Program for
Light Water Reactor LOCA and Non-LOCA Transient Analysis", SER dated April 9, 2002.
10. BAW-10227-PA, Evaluation of Advanced Cladding and Structural Material (M5) in PWR Reactor Fuel, SER dated February 4, 2000.
11. Variable Low Pressure Safety Limit, OSC-4048, Revision 3, July 1998
12. Power Imbalance Safety Limits and Tech Spec Setpoints Using Error Adjusted Flux-Flow Ratio of 1.094, OSC-5604, Revision 1, November 1998
13. ΔT_c and EOC Reduced Tavg Operation, OSC-7265, Rev. 0, Duke Power Co., April 2001.
14. O1C21 Maneuvering Analysis, OSC-7940, Revision 1, March 2002.
15. O1C21 Specific DNB Analysis, OSC-7945, Revision 0, October 2001.
16. O1C21 Reload Safety Evaluation, OSC-8046, Revision 0, March 2002.