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September 3, 2003

U. S. Nuclear Regulatory Commission
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Subject: Oconee Nuclear Site Docket No. 50-269
Core Operating Limits Report (COLR)

Gentlemen:

Attached, pursuant to Oconee Technical Specifications 5.6.5, is an information copy of a revision to the Core Operating Limits Report for Oconee Unit 1, Cycle 21, Rev. 19.

Very truly yours,



R. A. Jones Site, Vice President
Oconee Nuclear Site

Attachment

A001

NRC Document Control Desk
September 3, 2003
Page 2

xc w/att: Mr. L. A. Reyes, Regional Administrator
U. S. Nuclear Regulatory Commission, Region II

Mr. L. N. Olshan, Project Manager
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Senior Resident Inspector
Oconee Nuclear Site

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WORK ITEM: EXEMPTION M-5
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OCONEE 1 CYCLE 21
CORE OPERATING LIMITS REPORT

Page 1 of 1

Date: 08/28/03

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Duke Power Company

Oconee 1 Cycle 21

Core Operating Limits Report

QA Condition 1

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Not Reviewed or Approved by CFAM 3.13

Prepared By : J. D. Forster

J. D. Forster

Date : 25 AUG 2003

Checked By : L. D. McClain

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Date : 26 Aug 2003

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Date : 8/27/2003

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Date : 8/27/2003

INSPECTION OF ENGINEERING INSTRUCTIONS

Inspection Waived By:

R. R. M. Clari
(Sponsor)

Date:

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RES (Reactor)

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Oconee 1 Cycle 21

Core Operating Limits Report

Insertion Sheet for Revision 19

This revision is not valid until the end of operation for Oconee 1 Cycle 20.

Remove these revision 18 pages

1, 2 and 3

Insert these revision 19 pages

1, 2 and 3

1a
Q103

Revision Log

| Revision | Effective Date | Pages Revised | Pages Added | Pages Deleted | Total Effective Pages |
|--|----------------|----------------------------|-------------|---------------|-----------------------|
| Oconee 1 Cycle 21 revisions below | | | | | |
| 19 | Aug-03 | 1, 2, 3 | 1a | - | 32 |
| 18 | Apr-02 | 1, 2, 4 | - | - | 32 |
| 17 | Mar-02 | 1-31 | 32 | - | 32 |
| Oconee 1 Cycle 20 revisions below | | | | | |
| 16 | May-01 | 1-4 | - | - | 31 |
| 15 | Nov-00 | 1-31 | - | - | 31 |
| Oconee 1 Cycle 19 revisions below | | | | | |
| 14 | Oct-00 | 1,2,3,5 | - | - | 31 |
| 13 | Feb-00 | 1,2,3,4 | - | - | 31 |
| 12 | Jul-99 | 1, 2, 3, 8, 10, 13, 31 | - | - | 31 |
| 11 | May-99 | 1 - 31 | - | - | 31 |
| Oconee 1 Cycle 18 revisions below | | | | | |
| 10 | Mar-99 | 1 - 31 | - | 32-38 | 31 |
| 9 | Feb-98 | 1,2,3,5,13, 16,17,32,36 | - | - | 38 |
| 8 | Nov-97 | 1,2,3,5,10, 32 | 37 | - | 38 |
| 7 | Aug-97 | 1 - 38 | - | - | 38 |

Oconee 1 Cycle 21

1.0 Error Adjusted Core Operating Limits

The Core Operating Limits Report for O1C21 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 O1C21 by references 14 through 16. The O1C21 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) Tav_g reduction of up to 10 °F provided 4 RCPs are in operation and Tav_g 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 O1C21 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.
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 Tav_g Operation, OSC-7265, Rev. 0, Duke Power Co., April 2001.
14. O1C21 Maneuvering Analysis, OSC-7940, Revision 4, August 2003.
15. O1C21 Specific DNB Analysis, OSC-7945, Revision 0, October 2001.
16. O1C21 Reload Safety Evaluation, OSC-8046, Revision 1, August 2003.