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May 22, 2002

U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D. C. 20555

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. 18.

Very truly yours,

A handwritten signature in cursive script that reads 'Bruce Hamilton /for'.

W. R. McCollum, Site Vice President  
Oconee Nuclear Site

Attachment

A001

NRC Document Control Desk

May 22, 2002

Page 2

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

Mr. L. N. Olshan, Project Manager  
Office of Nuclear Reactor Regulation

Mr. Mel Shannon  
Senior Resident Inspector  
Oconee Nuclear Site

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**REFERENCE**

NUCLEAR GENERAL OFFICE  
OCONEE NUCLEAR STATION  
EXEMPTION CODE: M-5  
RESP GROUP: N/E  
OCONEE 1 CYCLE 21  
CORE OPERATING LIMITS REPORT

Page 1 of 1

Date: 04/23/02

Document Transmittal #: DUK021130046

QA CONDITION

☒ Yes ☐ No

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## Duke Power Company

Oconee 1 Cycle 21 FOR INFORMATION ONLY

### Core Operating Limits Report

#### QA Condition 1

~~Not Reviewed or Approved by CFAM 3.13~~

REVIEWED AND APPROVED BY CFAM 3.13

Prepared By : J. D. Forster Joy D. Forster

Date : 22 APR 2002

Checked By : L. D. McClain L. D. McClain

Date : 22 Apr 2002

CDR By : R. Q. Huynh R. Q. Huynh

Date : 22 Apr 2002

Approved By : R. R. St. Clair R. R. St. Clair

Date : 22 Apr 2002

# Oconee 1 Cycle 21

## Core Operating Limits Report

### Insertion Sheet for Revision 18

This revision is not valid until the end of operation for Oconee 1 Cycle 20.
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Remove these revision 17 pages

Insert these revision 18 pages

1, 2 and 4

1, 2 and 4

### Revision Log

Revision	Effective Date	Pages Revised	Pages Added	Pages Deleted	Total Effective Pages
<b>Oconee 1 Cycle 21 revisions below</b>					
18	Apr-02	1, 2, 4	-	-	32
17	Mar-02	1-31	32	-	32
<b>Oconee 1 Cycle 20 revisions below</b>					
16	May-01	1-4	-	-	31
15	Nov-00	1-31	-	-	31
<b>Oconee 1 Cycle 19 revisions below</b>					
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
<b>Oconee 1 Cycle 18 revisions below</b>					
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

### Miscellaneous Setpoints

BWST boron concentration shall be greater than 2220 ppm and less than 3000 ppm.  
Referred to by ITS 3.5.4.

Spent fuel pool boron concentration shall be greater than 2220 ppm and less than 3000 ppm.  
Referred to by ITS 3.7.12.

The equivalent of at least 1100 cubic feet of 11,000 ppm boron shall be maintained in the CBAST.  
Referred to by ITS SLC 16.5.13.

CFT boron concentration shall be greater than 1835 ppm. The average boron concentration in the CFT's shall be less than 4000 ppm. Referred to by ITS 3.5.1.

RCS and Refueling canal boron concentration shall be greater than 2220 ppm.  
Referred to by ITS 3.9.1.

Shutdown Margin (SDM) shall be greater than 1%  $\Delta k/k$ .  
Referred to by ITS 3.1.1.

Moderator Temperature Coefficient (MTC) shall be less than:	MTC x 10 <sup>-4</sup>	
Linear interpolation is valid within the table provided.	$\Delta p / ^\circ F$	% FP
Referred to by ITS 3.1.3.	+0.70	0
	+0.40	15
	0.00	80
	-0.125	100
	-0.25	120

Departure from Nucleate Boiling (DNB) parameter for RCS loop pressure shall be  
Referred to by ITS 3.4.1.

4 RCP:	measured hot leg pressure $\geq$ 2125 psig
3 RCP:	measured hot leg pressure $\geq$ 2125 psig

DNB parameter for RCS loop average temperature shall be:	Max Loop Tav <sub>g</sub> (Incl 2°F unc)		
Referred to by ITS 3.4.1.	$\Delta T_c, ^\circ F$	4 RCP Op	3 RCP Op
	0	581.0	581.0
	1	581.4	581.2
	2	581.8	581.4
	3	582.1	581.7
	4	582.5	581.9
	5	582.9	582.1

The measured Tav<sub>g</sub> must be less than COLR limits minus instrument uncertainty.  $\Delta T_c$  is the setpoint value selected by the operators. Values are expanded by linear interpolation on page 32 of this document **without** instrument uncertainty.

\* This limit is applied to the loop with the lowest loop average temperature consistent with the NOTE in SR 3.4.1.2. All other temperature limits apply to the maximum loop Tav<sub>g</sub>.

DNB parameter for RCS loop total flow shall be:

4 RCP:	Measured $\geq$ 108.5 %df
3 RCP:	Measured $\geq$ 74.7 % of 4 RCP min flow

Referred to by ITS 3.4.1.

Regulating rod groups shall be withdrawn in sequence starting with group 5, group 6, and finally group 7.  
Referred to by ITS 3.2.1.

Regulating rod group overlap shall be 25%  $\pm$  5% between two sequential groups.  
Referred to by ITS 3.2.1.