

QA CONDITION 1

DUKE POWER COMPANY

OCONEE 2 CYCLE 12

CORE OPERATING LIMITS REPORT

REVISION 0

APRIL 17, 1990

REFERENCE OSC-3934

Prepared by:

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Checked by:

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Approved by:

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Oconee Nuclear Station
Unit 2 Cycle 12
Core Operating Limits Report
Revision 0

REVISION LOG

<u>Revision</u>	<u>Effective Date</u>	<u>Effective Pages</u>
Original Issue	17APR90	Pages 1 - 18

1.0 Core Operating Limits

This Core Operating Limits Report for O2C12 has been prepared in accordance with the requirements of Technical Specification 6.9. The core operating limits have been developed using NRC-approved methodology (Reference 1) and are documented in Reference 2. The Reactor Coolant System design flow used in Reference 2 for O2C12 is 108.5% (of 88,000 gpm per RCP).

The following cycle-specific core operating limits are included in this report:

- 1) RPS Safety Limits,
- 2) Steady State Operating Band,
- 3) Operational power-imbalance limits, and
- 4) Operational and shutdown margin-limited control rod position limits.

1.1 References

1. Duke Power Company, Oconee Nuclear Station, Reload Design Methodology II, DPC-NE-1002A, October 1985.
2. O2C12 Maneuvering Analysis, Duke Power Company calculational file, OSC-3934, Revision 0, April 1990.

Oconee 2 Cycle 12

RPS Safety Limit Breakpoints

	POWER % OF 2568MW	IMBALANCE LIMITS
4 PUMP	0.0	-48.00
	100.0	-48.00
	112.0	-31.10
	112.0	31.10
	100.0	48.00
	0.0	48.00
3 PUMP	0.0	-48.00
	72.9	-48.00
	84.9	-31.10
	84.9	31.10
	72.9	48.00
	0.0	48.00

Oconee 2 Cycle 12

Steady State Operating Band

RI, %WD		APSR, %WD	
MIN	MAX	MIN	MAX
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292	300	30	40

Oconee 2 Cycle 12

Operational Power Imbalance Breakpoints

	POWER % OF 2568MW	IMBALANCE LIMITS
4 PUMP	0.0	-32.57
	80.0	-32.57
	90.0	-29.43
	102.0	-19.63
	102.0	18.71
	90.0	29.01
	80.0	29.01
	0.0	29.01
3 PUMP	0.0	-32.57
	77.0	-32.57
	77.0	29.01
	0.0	29.01

Referred to by Tech. Spec. 3.5.2.6

Oconee 2 Cycle 12

ROD INDEX OPERATIONAL LIMITS

0 EFPD to EOC

	POWER % OF 2568MW	RI, %WD	
		MIN	MAX
4 PUMP	102	260.0	300.0
	90	260.0	300.0
	80	240.0	300.0
	50	200.0	300.0
	15	90.0	300.0
	5	0.0	300.0
3 PUMP	77	236.0	300.0
	50	200.0	300.0
	15	90.0	300.0
	5	0.0	300.0

Referred to by Tech. Spec.

3.1.3.5

3.1.11

3.5.2.1.b

3.5.2.2.d.2.c

3.5.2.3

3.5.2.5.c

Oconee 2 Cycle 12

ROD INDEX SHUTDOWN MARGIN LIMITS

0 EFPD to EOC

	POWER % OF 2568MW	RI, %WD	
		MIN	MAX
4 PUMP	102	220.0	300.0
	50	160.0	300.0
	15	90.0	300.0
	5	0.0	300.0
3 PUMP	77	210.0	300.0
	50	160.0	300.0
	15	90.0	300.0
	5	0.0	300.0

Referred to by Tech. Spec.:

- 3.1.3.5
- 3.1.11
- 3.5.2.1.b
- 3.5.2.2.d.2.c
- 3.5.2.3
- 3.5.2.5.c

QA CONDITION 1

DUKE POWER COMPANY
OCONEE 1 CYCLE 13
CORE OPERATING LIMITS REPORT
REVISION 0
JANUARY 15, 1990

REFERENCE OSC-3727

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Oconee Nuclear Station
Unit 1 Cycle 13
Core Operating Limits Report
Revision 0

REVISION LOG

<u>Revision</u>	<u>Effective Date</u>	<u>Effective Pages</u>
Original Issue	15JAN90	Pages 1 - 18

1.0 Core Operating Limits

This Core Operating Limits Report for 01C13 has been prepared in accordance with the requirements of Technical Specification 6.9. The core operating limits have been developed using NRC-approved methodology (Reference 1) and are documented in Reference 2. The Reactor Coolant System design flow used in Reference 2 for 01C13 is 108.5% (of 88,000 gpm per RCP).

The following cycle-specific core operating limits are included in this report:

- 1) RPS Safety Limits.
- 2) Steady State Operating Band,
- 3) Operational power-imbalance limits, and
- 4) Operational and shutdown margin-limited control rod position limits.

1.1 References

1. Duke Power Company, Oconee Nuclear Station, Reload Design Methodology II, DPC-NE-1002A, October 1985.
2. 01C13 Maneuvering Analysis, Duke Power Company calculational file, OSC-3727, Revision 0, January 1990.

Oconee 1 Cycle 13

RPS Safety Limit Breakpoints

	POWER % OF 2568MW	IMBALANCE LIMITS
4 PUMP	0.0	-48.00
	100.0	-48.00
	112.0	-31.10
	112.0	31.10
	100.0	48.00
	0.0	48.00
3 PUMP	0.0	-48.00
	72.9	-48.00
	84.9	-31.10
	84.9	31.10
	72.9	48.00
	0.0	48.00

Oconee 1 Cycle 13

Steady State Operating Band

RI, %WD		APSR, %WD	
MIN	MAX	MIN	MAX
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292	300	30	40

Oconee 1 Cycle 13

Operational Power Imbalance Breakpoints

	POWER % OF 2568MW	IMBALANCE LIMITS
4 PUMP	0.0	-31.56
	80.0	-31.56
	90.0	-28.31
	102.0	-18.28
	102.0	30.18
	90.0	31.28
	80.0	32.29
	0.0	32.29
3 PUMP	0.0	-31.56
	77.0	-31.56
	77.0	32.29
	0.0	32.29

Referred to by Tech. Spec. 3.5.2.6

Oconee 1 Cycle 13

ROD INDEX OPERATIONAL LIMITS

0 EFPD to EOC

	POWER % OF 2568MW	RI, %WD	
		MIN	MAX
4 PUMP	102	260.0	300.0
	90	260.0	300.0
	80	240.0	300.0
	50	200.0	300.0
	15	90.0	300.0
	5	0.0	300.0
3 PUMP	77	236.0	300.0
	50	200.0	300.0
	15	90.0	300.0
	5	0.0	300.0

Referred to by Tech. Spec.

- 3.1.3.5
- 3.1.11
- 3.5.2.1.b
- 3.5.2.2.d.2.c
- 3.5.2.3
- 3.5.2.5.c

Oconee 1 Cycle 13

ROD INDEX SHUTDOWN MARGIN LIMITS

0 EFPD to EOC

	POWER % OF 2568MW	RI, %WD	
		MIN	MAX
4 PUMP	102	220.0	300.0
	50	160.0	300.0
	15	90.0	300.0
	5	0.0	300.0
3 PUMP	77	210.0	300.0
	50	160.0	300.0
	15	90.0	300.0
	5	0.0	300.0

Referred to by Tech. Spec.:

- 3.1.3.5
- 3.1.11
- 3.5.2.1.b
- 3.5.2.2.d.2.c
- 3.5.2.3
- 3.5.2.5.c