

March 6, 1978

Docket No. 50-269

LICENSEE: DUKE POWER COMPANY

FACILITY: OCONEE NUCLEAR STATION, UNIT NO. 1

SUMMARY OF MEETING HELD ON FEBRUARY 28, 1978, IN BETHESDA, MARYLAND TO DISCUSS DUKE PROPOSAL TO INCREASE ALLOWABLE FLUX TILT LIMITS

Background

During startup tests of Cycle 4 of the Oconee Unit No. 1 reactor a core flux tilt, not predicted nor understood at that time, was observed. NRC issued a license amendment in November 1977 restricting core operations to 100 effective full power days in order for the licensee to gain an understanding of the reasons for the tilt. The tilt has since decreased and the licensee made a submittal on January 23, 1978 with an acceptable explanation of the phenomenon. By License Amendments dated February 17, 1978, the Oconee Nuclear Station's common Technical Specifications were revised to allow Cycle 4 operation of Oconee Unit No. 1 past 100 effective full power days to the end of the cycle. In the February 23, 1978 License Amendment, and the preceding November 1977 Amendment, NRC approved a flux tilt limit of 3.41%. The licensee had requested a flux tilt limit of 6.03%. Our Safety Evaluation of February 17, 1978 stated, "We are continuing our review of the 6.03% limit and are awaiting additional information from the licensee."

Summary

The licensee accompanied by Babcock and Wilcox, the nuclear steam system supplier of Oconee Unit No. 1, presented information to the NRC staff to justify an increase the core flux tilt limit from 3.41% to 6.03%. Duke Power (W. McCollum) discussed the plant computer system that monitors tilt, data reduction techniques and data available to the plant operators in regard to following flux tilt. B&W (R. Reith) described the incore monitoring system. B&W (Gary Hanson) discussed the effects of tilt on power peaking and dropped or ejected control rod worths. Curves of Change in Peak Power (%) versus Indicated Incore Tilt (%) (with uncertainties) were shown to the staff. We requested that the inputs used to derive the curves be submitted with any proposed license amendment from Duke to increase the limit. The

OFFICE	ORB#4: DUK				
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licensee agreed to this request. In addition the licensee agreed to include a reporting requirement in the Technical Specification request if the tilt reaches the 3.41% level.

Morton Fairtile, Project Manager
Operating Reactors Branch #4
Division of Operating Reactors

Enclosure:
List of Attendees

OFFICE →	ORB#4:DOR					
SURNAME →	MFairtile:cn					
DATE →	3/7/78					

MEETING OF 2/28/78

FLUX TILT LIMITS

LIST OF ATTENDEES

<u>Name</u>	<u>Organization</u>
M. Fairtile	NRC, DOR
Bill McCollum	Duke Power - Core Perf.
Ray Reith	B&W, Fuel Engineering
P. M. Abraham	Duke, Licensing
M. M. Mendonca	NRC, Reactor Safety
E. R. Kane	B&W, Licensing
Charles T. Rombough	B&W, Fuel Engineering
Margaret Chatterton	NRC, Reactor Safety
Marv Gudorf	B&W, Fuel Engineering
Gary Hanson	B&W, Fuel Engineering
K. S. Canady	Duke, Licensing & Projects
Sam MacKay	NRC, DOR, PSB
Don Neighbors	NRC, DOR
Jack Rosenthal	NRC, DOR, RSB
Peter S. Kapo	NRC, DOR, RSB
Paul T. Burnett	NRC, Region II, Atlanta
Ernie Coppola	B&W, Project Management
M. Dunenfeld	NRC, DOR, RSB
R. R. Landry	NRC, DOR, RSB
H. Richings	NRC, DSS, CPB
W. Brooks	NRC, DSS, CPB
R. L. Gill	Duke, Oconee Licensing
Ragnwald Muller	ACRS Staff