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AUTH.NAME AUTHOR AFFILIATION
TUCKER,H.B. Duke Power Co.
RECIP.NAME RECIPIENT AFFILIATION
DENTON,H.R. Office of Nuclear Reactor Regulation, Director

SUBJECT: Supplemental application for amend to Licenses DPR-38,DPR-47 & DPR-55,revising Tech Specs to provide curves based on matls properties previously provided & revised set of operator guidance.

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February 24, 1983

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Mr. J. F. Stolz, Chief
Operating Reactors Branch No. 4

Subject: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287

Dear Sir:

By letter dated November 12, 1982, Duke Power Company submitted a proposed license amendment to the Oconee Facility Operating License and revision to the Technical Specifications which concerned heatup, cooldown, and inservice test limitations for the reactor coolant systems of each Oconee unit. This submittal supplements the initial submittal and provides curves which are based on the materials properties previously provided and a revised set of operator guidance.

For several months, Duke and Babcock and Wilcox, the Oconee NSSS vendor, have been reviewing and evaluating the analytical assumptions, such as the number of reactor coolant pumps in operation and step changes in temperature, used in establishing the curves. These assumptions were compared to actual plan operation to assure consistency and to provide sufficient operational flexibility. The resultant new operator guidance is contained in Tables 1 and 2 and was used in the development of the new Technical Specification curves that are attached. The proposed new curves are based on the analytical techniques documented in BAW-10046 and material properties projected for 15 EFPY. Predicted changes in material properties were based on data contained in BAW-1511P, BAW-1697, and BAW-1699 which have been submitted previously.

These enclosed 15 EFPY curves replace those currently under review by the NRC. The Oconee 1 curves were revised to reflect the new operational guidance for plant cooldown and to incorporate the weld chemistry data from BAW-1511P. The Oconee 2 and Oconee 3 curves reflect the new plant cooldown operational guidance and the materials data from BAW-1697 and BAW-1699.

Duke Power personnel have discussed this matter with the appropriate NRC reviewer. However, should there be any question concerning this submittal, please call the normal licensing contact.

A001

Inasmuch as this submittal supplements a proposed license amendment previously submitted, no additional license fees are considered necessary.

Very truly yours,

Hal B. Tucker

RLG/php
Attachment

cc: Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Mr. J. C. Bryant
NRC Resident Inspector
Oconee Nuclear Station

Mr. E. L. Conner, Jr.
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Data for Preparation of Pressure-Temperature Limit Curves for Duke Power Company, Oconee Nuclear Station - Unit 1, Applicable through 15 Full Power Years

Material Identification			Weldment Location						Neutron Fluence end of 15 EFPY (E > 1 MeV), n/cm²		Radiation-induced ΔRT_{NDT} at end of 15 EFPY, Δ^oF (3)		Adjusted RT_{NDT} at End of 15 EFPY, °F	
Heat No.	Type	Beltline Region Location	Core Midplane to Weld CL, cm	Location from Major Axis, Degrees	Weld 1/4T Location	Unirr. RT_{NDT} °F (1)	Copper Content % (2)	Phosphorus Content, % (2)	At 1/4T	At 3/4T	At 1/4T	At 3/4T	At 1/4T	At 3/4T
AHR-54	SA508, Cl 2	Lower Nozzle Belt	--	--	--	(+60)			5.70E17	1.33E17	<50/29	<50/14	<110/89	<110/74
C2197-2	SA302B, Mod	Intermed. Shell	--	--	--	(+40)			2.69E18	6.34E17	<50/34	<50/16	<90/74	<90/56
C3278-1	SA302B, Mod	Upper Shell	--	--	--	(+40)			3.58E18	8.3E17	90	<50/43	130	<90/83
C3265-1	SA302B, Mod	Upper Shell	--	--	--	20			3.58E18	8.3E17	75	<50/36	95	<70/56
C2800-1	SA302B, Mod	Lower Shell	--	--	--	(+40)			3.58E18	8.3E17	72	<50/35	112	<90/75
C2800-2	SA302B, Mod	Lower Shell	--	--	--	20			3.58E18	8.3E17	72	<50/35	92	<70/55
SA1494	Weld	Outlet Nozzle	+245	--	--	(+20)			1.92E16	4.49E15	<50/8	<50/4	<70/28	<70/24
SA1526	Weld	Outlet Nozzle	+245	--	--	(+20)			1.92E16	4.49E15	<50/15	<50/7	<70/35	<70/27
SA1135	Weld	Intermed. Circum.	+199	--	Yes	(+20)			5.70E17	1.34E17	54	<50/26	74	<70/46
SA1229	Weld	Upper Circum. (I.D. 61%)	+123	--	Yes	(+20)			2.69E18	--	148	--	168	--
WF25	Weld	Upper Circum. (O.D. 39%)	+123	--	No	(+20)			--	6.34E17	--	86	--	106
SA1585	Weld	Middle Circum.	-61	--	Yes	(+20)			3.58E18	8.32E17	126	61	146	81
WF-9	Weld	Lower Circum.	-249	--	Yes	(+20)			1.98E16	4.65E15	<50/9	<50/5	<70/29	<70/5
SA1073	Weld	Upper Longit. (Both)	--	22	Yes	(+20)			2.11E18	4.99E17	151	74	171	94
SA1493	Weld	Middle Longit. (Both)	--	48	Yes	(+20)			2.60E18	6.08E17	150	73	170	93
SA1430	Weld	Lower Longit. (Both)	--	20	Yes	(+20)			3.16E18	7.68E17	166	82	186	102

(1) Per BAW-10046P, March 1976
(2) Weld Chemistry per BAW-1511P, October 1980
(3) Per Regulatory Guide 1.99, Revision 1