

NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL  
(TEMPORARY FORM)

CONTROL NO: 3539

FILE: \_\_\_\_\_

FROM: Duke Power Co Charlotte, NC A C Thies		DATE OF DOC 3-27-75	DATE REC'D 4-2-75	LTR XXXXXX	TWX	RPT	OTHER
TO: Mr Giambusso		ORIG one signed	CC	OTHER	SENT AEC PDR		XX
					SENT LOCAL PDR		XX
CLASS	UNCLASS XXXXXX	PROP INFO	INPUT	NO CYS REC'D 1	DOCKET NO: 50-269		
DESCRIPTION:  Ltr furnishing info with regard to EDDY Current testing performed during Nov & Dec of 1974.....				ENCLOSURES:			
PLANT NAME: Oconee #1							

FOR ACTION/INFORMATION 4-2-75 ehf

BUTLER (L) W/ Copies	SCHWENCER (L) W/ Copies	ZIEMANN (L) W/ Copies	REGAN (E) W/ Copies
CLARK (L) W/ Copies	STOLZ (L) W/ Copies	DICKER (E) W/ Copies	LEAR (L) W/ Copies
PARR (L) W/ Copies	VASSALLO (L) W/ Copies	KNIGHTON (E) W/ Copies	SPELS W/ Copies
KNIEL (L) W/ Copies	PURPLE (L) W/ Copies	YOUNGBLOOD (E) W/ Copies	

INTERNAL DISTRIBUTION

<u>REG FILE</u> NRC PDR OGC, ROOM P-506A GOSSICK/STAFF CASE GIAMBUSO BOYD MOORE (L) DEYOUNG (L) SKOVHOLT (L) GOLLER (L) (Ltr) P. COLLINS DENISE REG OPR FILE & REGION (2) T.R. WILSON STEELE	<u>TECH REVIEW</u> SCHROEDER MACCARY KNIGHT PAWLICKI SHAO STELLO HOUSTON NOVAK ROSS IPPOLITO TEDESCO LONG LAINAS BENAROYA VOLLMER	DENTON GRIMES GAMMILL KASTNER BALLARD SPANGLER  ENVIRO MULLER DICKER KNIGHTON YOUNGBLOOD REGAN PROJECT LDR <i>Scaletti</i> HARLESS	<u>LIC ASST</u> R. DIGGS (L) H. GEARIN (L) E. GOULBOURNE (L) P. KREUTZER (E) J. LEE (L) M. MAIGRET (L) S. REED (E) M. SERVICE (L) S. SHEPPARD (L) M. SLATER (E) H. SMITH (L) S. TEETS (L) G. WILLIAMS (E) V. WILSON (L) R. INGRAM (L)	<u>A/T IND.</u> BRAITMAN SALTZMAN MELTZ  PLANS MCDONALD CHAPMAN DUBE (Ltr) E. COUPE PETERSON HARTFIELD (2) KLECKER EISENHUT WIGGINTON
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EXTERNAL DISTRIBUTION

-1 - LOCAL PDR <i>Walhalla, s.c.</i>	-1 - TIC. (ABERNATHY) (1)(2)(10)	-1 - NATIONAL LABS	1 - PDR-SAN/LA/NY
-1 - NSIC (BUCHANAN)	1 - ASLB	1 - W. PENNINGTON, Rm E-201 GT	1 - BROOKHAVEN NAT LAB
1 - Newton Anderson	1 - ACRS HOLDING/SENT	1 - CONSULTANTS	1 - G. ULRIKSON, ORNL
<i>To L.A. Sheppard</i>		NEWMARK/BLUME/AGBABIAN	1 - AGMED (RUTH GUSSMAN) Rm B-127 GT
			1 - J. D. RUNKLES, Rm E-201 GT

# DUKE POWER COMPANY

POWER BUILDING

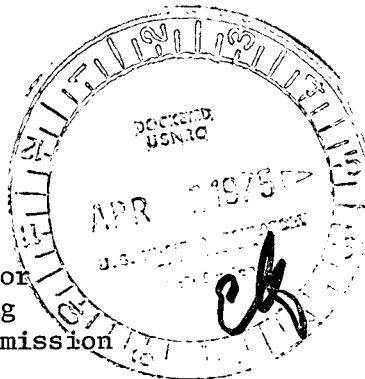
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A. C. THIES  
SENIOR VICE PRESIDENT  
PRODUCTION AND TRANSMISSION

P. O. Box 2178

March 27, 1975

Mr. Angelo Giambusso, Director  
Division of Reactor Licensing  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555



Re: Oconee Unit 1  
Docket No. 50-269

Dear Mr. Giambusso:

During the first refueling outage of Oconee Unit 1, both once-through steam generators (OTSG) were inspected. The examination was performed during November and December, 1974, using visual inspection and eddy-current techniques. The eddy-current inspection utilized equipment, procedure, sample selection, and acceptance criteria consistent with the regulatory position of Regulatory Guide 1.83, "Inservice Inspection of Pressurized Water Reactor Steam Generator Tubes."

The eddy-current testing was performed by Conam Inspection, Inc., under subcontract to the Babcock & Wilcox Company and was supervised by B&W Construction Company. During this inspection, 503 (3.30 percent) of the tubes in the A OTSG and 493 (3.17 percent) of the tubes in the B OTSG were examined. Tubes examined were randomly selected in all four quadrants of each steam generator. The inspection was performed by personnel qualified in accordance with American Society for Non-Destructive Testing Standard STN-TC-1A and supplements. The inspection was conducted in accordance with written, approved procedures.

Of the 996 steam generator tubes examined using the eddy-current technique, none of the tubes had a detectable wall penetration greater than 20 percent of the minimum as-manufactured tube wall thickness. The inspection equipment provided a sensitivity that will detect defects with a penetration of 20 percent or more of the tube wall thickness.

The visual inspection consisted of examination of four areas in the A OTSG and two locations in the B OTSG. Manways and handholds at various levels were selected to permit viewing potential problem areas. Fiber optics were used to permit viewing locations where access openings

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were small and to examine the tubes and tube support plates at points that would otherwise be inaccessible. Generally, the tubes and tube support plates were covered with a greenish-black deposit. The deposit was very light, with much of the original reflectiveness of the tubes still in evidence. There was no evidence of tube-to-support plate interaction. Examination of the tube sheet and feedwater annulus showed essentially no accumulation of oxides in either area. Part of the inspection program included obtaining samples of oxide that may have accumulated in the generator. Attempts to collect oxide samples using a knife-edge, stainless steel spatula were futile due to the minimal amount of oxide present. The reddish-brown oxide was easily removed by wiping with filter paper for oxide analysis. The results of the wipe sample and scale analyses showed that the samples contained predominantly corrosion-product iron with lesser quantities of nickel and chromium. None of these materials will be detrimental to the steam generators in the quantities found.

It is important to note that Oconee Unit 1 was involved in an extended startup program. The time from initial hot functional testing to shutdown for the first refueling exceeded 32 months. During that time, cleanup of the feedwater-condensate system was accomplished, and numerous startups were experienced, including recovery from 37 unscheduled trips. The period before the first steam generator inspection represents the worst service conditions expected to be encountered during the service life of the steam generators. In spite of this, the steam generators were found free of detectable defects using eddy-current techniques. Furthermore, there has been no deposition of solids which has been the arena for chemical attack. It is also important to note that no conditions were found which are indicative of the tube wall thinning and stress corrosion problems which have been encountered recently in recirculation-type steam generators.

Very truly yours,



A. C. Thies

ACT:vr