

AEC CONTRIBUTION FOR PART 50 DOCKET MATERIAL  
(TEMPORARY FORM)

CONTROL NO: 8989

FILE: ENVIRON

FROM: Duke Power Company Charlotte, N.C. 28201 Mr. A. C. Thies			DATE OF DOC 12-13-73	DATE REC'D 12-18-73	LTR X	MEMO	RPT	OTHER
TO: A. Giambusso			ORIG 3 signed	CC	OTHER	SENT AEC PDR XXX SENT LOCAL PDR XXX		
CLASS	UNCLASS XXX	PROP INFO	INPUT XXX	NO CYS REC'D 40		DOCKET NO: 50-269/270		

DESCRIPTION:  
Ltr notarized 12-13-73, requesting a change to Environmental Tech. Specs.....trans the following.....

ENCLOSURES:  
Revised pages to the Environmental Tech Specs for Oconee Units 1 & 2

**ACKNOWLEDGED**  
(40 cys encl rec'd)

**DO NOT REMOVE**

PLANT NAME: Oconee 1 & 2

FOR ACTION/INFORMATION

12-20-73 JB

BUTLER(L) W/ Copies	SCHWENCER(L) W/ Copies	ZIEMANN(L) W/ Copies	REGAN(E) W/ Copies
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✓ AEC PDR (2)	HENDRIE	✓ GRIMES	DIGGS (L)	BRAITMAN
✓ OGC, ROOM P-506A	SCHROEDER	GAMMILL	GEARIN (L)	SALTZMAN
MUNTZING/STAFF	MACCARY	✓ KASTNER	GOULBOURNE (L)	B. HURT
CASE	KNIGHT	✓ BALLARD	LEE (L)	PLANS
GIAMBUSSO	PAWLICKI	SPANGLER	MAIGRET (L)	MCDONALD
BOYD	SHAO	ENVIRO	SERVICE (L)	✓ DUBE
MOORE (L)(BWR)	STELLO	MULLER	SHEPPARD (E)	INFO
DEYOUNG(L)(PWR)	HOUSTON	DICKER	SMITH (L)	C. MILES
SKOVHOLT (L)	NOVAK	KNIGHTON	TEETS (L)	✓ Schwencer
P. COLLINS	ROSS	YOUNGBLOOD	WADE (E)	
✓ REG OPR	IPPOLITO	REGAN	WILLIAMS (E)	
FILE & REGION(2)	✓ TEDESCO(2)	PROJECT LDR	WILSON (L)	
MORRIS	LONG			
STEELE	LAINAS			
	BENAROYA	HARLESS		
	VOLLMER			

EXTERNAL DISTRIBUTION

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✓ 1 - DTIE(ABERNATHY)	1-ASLBP(E/W Bldg, Rm 529)	1-GERALD LELLOUCHE
✓ 1 - NSIC(BUCHANAN)	1-W. PENNINGTON, Rm E-201 GT	BROOKHAVEN NAT. LAB
1 - ASLB(YORE/SAYRE/ WOODARD/"H" ST.	1-CONSULTANT'S NEWMARK/BLUME/AGBABIAN	1-AGMED(Ruth Gussman) RM-B-127, GT.
16 - CYS ACRS HOLDING	1-GERALD ULRIKSON...ORNL	1-RD..MULLER..F-309 GT

## DUKE POWER COMPANY

POWER BUILDING

422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28201

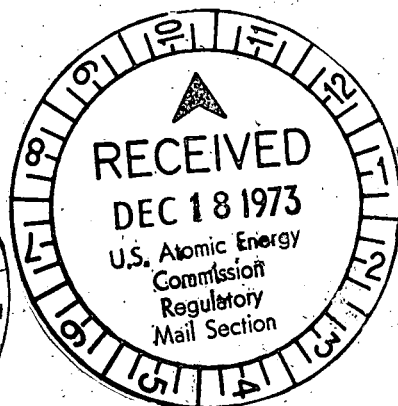
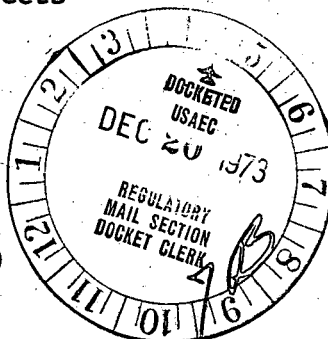
A. C. THIES  
SENIOR VICE PRESIDENT  
PRODUCTION AND TRANSMISSION

December 13, 1973

P. O. Box 2178

Mr. Angelo Giambusso  
Deputy Director for Reactor Projects  
Directorate of Licensing  
Office of Regulation  
U. S. Atomic Energy Commission  
Washington, D.C. 20545

Re: Oconee Nuclear Station  
Units 1 and 2  
Docket Nos. 50-269 and -270



Dear Mr. Giambusso:

The Oconee Nuclear Station Technical Specifications, Appendix B to Facility Operating Licenses DPR-38 and DPR-47, now require that certain chemical effluents from the plant be controlled not to exceed maximum concentrations as given in Table 1.2-1. The maximum possible resulting concentration of boric acid in the Keowee River as given by that table is  $8.8 \times 10^{-4}$  ppm. This limit is unrealistically and unnecessarily restrictive as indicated by the fact that it is lower by a factor of more than 100,000 than the concentration shown in WASH-1249, United States Atomic Energy Commission, June, 1973, Page E-1 as guidance for drinking water supplies.

In the absence of any known need for such a restrictive limit and in view of the great difficulty involved in meeting such a limit, we request that the limitation on boric acid be removed from Table 1.2-1 of Appendix B. The plant, however, would be operated in such a manner that, even during periods of maximum chemical discharge and minimum river flow, the resulting boric acid concentration in the Keowee River would be less than 1.0 ppm (approximately 3% of the WASH-1249 guide).

It is also requested that Technical Specification 1.2B of Appendix B be revised to clarify the point of measurement. This specification now states, "All water discharged from the waste water collection basin shall have a pH between 6.0 and 8.5." The pH of the effluent from the basin is not always representative of the actual discharge to the Keowee River because of the influence of other local drainage waste streams. Since the specification should apply to the actual discharge, we, therefore, propose the following revision: "The discharge to the Keowee River from the waste water collection basin and associated drainage shall have a pH between 6.0 and 8.5. The pH shall be determined daily from a representative sample collected from the combined effluent stream before it discharges to the river."

Mr. Angelo Giambusso  
Page 2  
December 13, 1973

Please find attached replacement pages 5 and 6 for the Technical Specifications Appendix B which reflect the requested changes.

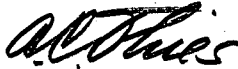
Very truly yours,



A. C. Thies

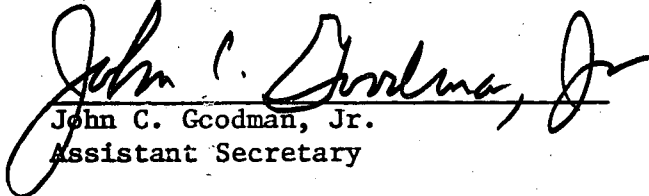
ACT:vr  
Attachments

A. C. THIES, being duly sworn, states that he is Senior Vice President of Duke Power Company; that he is authorized on the part of said Company to sign and file with the Atomic Energy Commission this request for revision to the Oconee Nuclear Station Technical Specifications Appendix B to Facility Operating Licenses DPR-38 and DPR-47; and that all statements and matters set forth therein are true and correct to the best of his knowledge.



A. C. Thies, Senior Vice President

ATTEST:

  
John C. Goodman, Jr.  
Assistant Secretary

Subscribed and sworn to me before this 13th day of December, 1973.



Edna B. Zarnes  
Notary Public

My Commission Expires:

October 24, 1977

## 1.2 CHEMICAL DISCHARGE LIMITS

**Objective:** To insure that all chemical releases from the station are controlled and diluted so as to be non-toxic to aquatic organisms in Hartwell Reservoir.

**Applicability:** Applies to release of chemical effluents from the station.

**Specification:**

- A. Chemical wastes and the resulting chemical concentrations in the Keowee River shall not exceed the maximum concentrations given in Table 1.2-1 "Chemical Wastes from Oconee Station."
- B. The discharge to the Keowee River from the waste water collection basin and associated drainage shall have a pH between 6.0 and 8.5. The pH shall be determined daily from a representative sample collected from the combined effluent stream before it discharges to the river.
- C. Chlorine or other chemical biocides will not be used for condenser cleaning.

**Monitoring:**

- A. The pH and specific conductance of the wastewater collection basin effluent shall be determined and recorded daily.
- B. A chemical inventory system shall be maintained to show the quantities used for each chemical in Table 1.2-1 and for any other environmentally significant chemicals which may be used. A combination of purchasing records and physical inventories shall be used to determine chemical usage.

**Bases:** Continuous dilution of the station chemical discharges will assure that concentrations of chemical effluents are maintained at low values. Table 1.2-1 is the same as Table III-14 in the Oconee 1, 2, and 3 Final Environmental Statement.

Requiring that the effluents result in chemical concentrations which are not toxic assures that aquatic organisms are protected.

Records of chemical usage plus sampling of effluent wastewater are used to monitor the quantity and strength of chemicals discharged.

Table 1.2-1. Chemical wastes from Oconee Nuclear Station

	Pounds per year (3 units) (from DPC)	Resulting concentration in Keowee River water (ppm)	
		Average <sup>e</sup>	Maximum possible <sup>b</sup>
<b>Reactor coolant</b>			
Lithium hydroxide	180	d	d
Hydrazine	300	e	e
<b>Steam generator feedwater</b>			
Hydrazine	1,800-13,000	e	e
<b>Regeneration of deborating demineralizers</b>			
Sodium hydroxide	4,100	f	f
<b>Regeneration of water treatment demineralizers</b>			
Sodium hydroxide	440,000	0.12 <sup>g</sup>	4.4 <sup>g</sup>
Sulfuric acid	150,500	0.068 <sup>h</sup>	2.5 <sup>h</sup>
<b>Laundry and cleaning detergents</b>			
Floor cleaning (liquid)	10,000	0.0046 <sup>i</sup>	0.17 <sup>i</sup>
Laundry (solid)	4,760	0.0022 <sup>i</sup>	0.081 <sup>i</sup>

<sup>a</sup>Total per year diluted by average tailrace flow of 1100 cfs ( $9.823 \times 10^{14}$  cm<sup>3</sup>/year).

<sup>b</sup>Total per year diluted by minimum tailrace flow of 30 cfs.

<sup>c</sup>Most will probably be removed by the demineralizers and evaporators.

<sup>d</sup>Normally, hydrazine is reacted chemically and is not discharged.

<sup>e</sup>Most of this material will be sent to the waste drumming facility as evaporator bottoms.

<sup>f</sup>Sodium released: Keowee River normal concentration is 1.2-2.8 ppm (G. A. Billingsley, "Chemical Character of Surface Waters of South Carolina, 1945-1955," Bulletin No. 163, South Carolina Development Board, 1956).

<sup>g</sup>Sulfate released: Keowee River normal conc. is 0.7-2.5 ppm (G. A. Billingsley, "Chemical Character of Surface Waters of South Carolina, 1945-1955," Bulletin No. 163, South Carolina Development Board, 1956).

<sup>i</sup>Processing of these wastes through the sanitary waste system may significantly reduce this value.