

FROM: Duke Power Company  
Charlotte, N.C.  
W.S. Lee

TO: Dr. Morris

DATE OF DOCUMENT: 9-25-70

DATE RECEIVED: 9-28-70

NO.: 3584

LTR.  MEMO:  REPLY:  OTHER:

ORIG.: 1 CC:  OTHER:

ACTION NECESSARY  CONCURRENCE  DATE ANSWERED

NO ACTION NECESSARY  COMMENT  BY:

CLASSIF: U POST OFFICE REG. NO. FILE CODE: 50-269, 50-270 50-287 (ENVIRO FILE)

DESCRIPTION: (Must Be Unclassified)  
Ltr w/answers in response to 9-9 ltr w/comments & questions fm S.C. Pollution Control Auth. trans by 9-17 Governor's ltr re "Enviro. Rpt for Keowee-Toxaway Proj."

REFERRED TO	DATE	RECEIVED BY	DATE
Long	9-29		
W/4 cys for ACTION (ORIG FOR MATSI (Orig to be			
DIST: returned to 016)			
Reg File (3) (1 ea docket)			
AEC PDR (3) (1 ea docket)			
Henderson			
Felton			
Shapar (Rm P-506A)			
DiNunno			
Boyd			
DeYoung			
E. Price SLR			
N. Dube			
R. Howe (2)			
Compliance (2) Low			
Morris/Schroeder			

ENCLOSURES:

DO NOT REMOVE

REMARKS:

ACKNOWLEDGED

3584

wms

DUKE POWER COMPANY  
POWER BUILDING, BOX 2173, CHARLOTTE, N. C. 28201

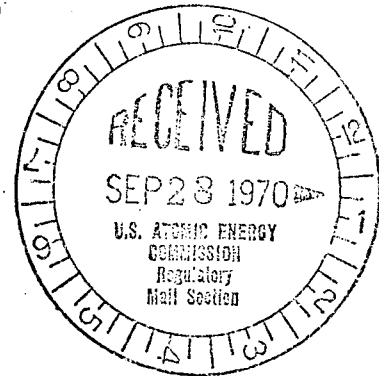
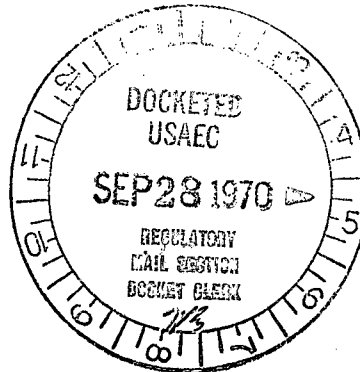
50 - 288  
50 - 276  
50 - 287

WILLIAM S. LEE  
VICE PRESIDENT, ENGINEERING

Regulatory File Cy.

September 25, 1970

Dr Peter Morris, Director  
Division of Reactor Licensing  
Atomic Energy Commission  
Washington 20545



Re: Oconee Nuclear Station  
Units 1, 2 & 3  
Dockets Nos 50-269-270-287

Dear Dr Morris:

By letter of September 17 to Mr Harold Price, Governor Robert E McNair transmitted comments of the state agencies of South Carolina with regard to the environmental effects of our Oconee Nuclear Station. Governor McNair's letter urged the granting of our Operating License.

Attached to Governor McNair's letter is a copy of the September 9 letter of the South Carolina Pollution Control Authority which included three questions in connection with page 3 of our report "Environmental Quality Features of Duke Power Company's Keowee-Toxaway Project." These questions are as follows:

"Page 3 of the report states no adverse effects on the ecology have been detected due to temperature rises.

- (a) What do they mean by adverse effects?
- (b) What happened to the number of species of micro-organisms due to the increase in temperature? Did they increase or decrease?
- (c) What happened to the number within the species of micro-organisms?"

We are pleased to submit the following information in response to these questions:

- (a) Page 3 of our report stated that the temperature rise through the Oconee condensers was consistent with temperature rises employed on Duke's lakes since 1926, "and no adverse effects on the ecology have been detected." This statement was based on long-term empirical observations that there has been no evidence, or even a single report, of any fish kills on our lakes due to thermal discharges.

3084

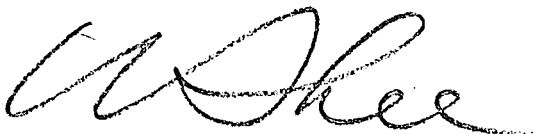
Dr Peter Morris  
Page 2  
September 25, 1970

(b) & (c)

As a part of the Edison Electric Institute's Research Project #49, biological studies are continuing on Lake Norman in the vicinity of our Marshall Steam Station which has been in service since 1965 with a skimmer wall similar to that provided for Oconee on Lake Keowee. These studies are being managed by scientists at Johns Hopkins University with assistance from local universities, state agencies and company personnel. It can be generally stated that studies of aquatic micro-organisms within the waters of Lake Norman which are thermally influenced by the Marshall Station show that planktonic populations do not reveal significant reductions in species, composition or diversity compared to control stations outside the thermal influence. As the detailed data from this program are assimilated and studied by the many participating groups, reports will be published that will speak more specifically to the effects on each species of micro-organism. Copies of these reports will be furnished to the South Carolina Pollution Control Authority as soon as available.

We have discussed this information with representatives of the South Carolina Pollution Control Authority, and they advise that this is a satisfactory response to their questions.

Yours very truly,



W S Lee

WSL/s

cc South Carolina Pollution Control Authority  
Attn: Mr Henry E Gibson

**DUKE POWER COMPANY**  
**POWER BUILDING, BOX 2178, CHARLOTTE, N. C. 28201**

WILLIAM S. LEE  
VICE PRESIDENT, ENGINEERING

September 25, 1970

Dr Peter Morris, Director  
Division of Reactor Licensing  
Atomic Energy Commission  
Washington 20545

Re: Oconee Nuclear Station  
Units 1, 2 & 3  
Dockets Nos 50-269-270-287

Dear Dr Morris:

By letter of September 17 to Mr Harold Price, Governor Robert E McNair transmitted comments of the state agencies of South Carolina with regard to the environmental effects of our Oconee Nuclear Station. Governor McNair's letter urged the granting of our Operating License.

Attached to Governor McNair's letter is a copy of the September 9 letter of the South Carolina Pollution Control Authority which included three questions in connection with page 3 of our report "Environmental Quality Features of Duke Power Company's Keowee-Toxaway Project." These questions are as follows:

"Page 3 of the report states no adverse effects on the ecology have been detected due to temperature rises.

- (a) What do they mean by adverse effects?
- (b) What happened to the number of species of micro-organisms due to the increase in temperature? Did they increase or decrease?
- (c) What happened to the number within the species of micro-organisms?"

We are pleased to submit the following information in response to these questions:

- (a) Page 3 of our report stated that the temperature rise through the Oconee condensers was consistent with temperature rises employed on Duke's lakes since 1926, "and no adverse effects on the ecology have been detected." This statement was based on long-term empirical observations that there has been no evidence, or even a single report, of any fish kills on our lakes due to thermal discharges.

Dr Peter Morris  
Page 2  
September 25, 1970

(b) & (c)

As a part of the Edison Electric Institute's Research Project #49, biological studies are continuing on Lake Norman in the vicinity of our Marshall Steam Station which has been in service since 1965 with a skimmer wall similar to that provided for Oconee on Lake Keowee. These studies are being managed by scientists at Johns Hopkins University with assistance from local universities, state agencies and company personnel. It can be generally stated that studies of aquatic micro-organisms within the waters of Lake Norman which are thermally influenced by the Marshall Station show that planktonic populations do not reveal significant reductions in species, composition or diversity compared to control stations outside the thermal influence. As the detailed data from this program are assimilated and studied by the many participating groups, reports will be published that will speak more specifically to the effects on each species of micro-organism. Copies of these reports will be furnished to the South Carolina Pollution Control Authority as soon as available.

We have discussed this information with representatives of the South Carolina Pollution Control Authority, and they advise that this is a satisfactory response to their questions.

Yours very truly,



W. S. Lee

WSL/s

cc South Carolina Pollution Control Authority  
Attn: Mr. Henry E Gibson