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ACCESSION NBR: 8710050500 DOC. DATE: 87/09/29 NOTARIZED: YES DOCKET #  
 FACIL: 50-000 Generic Docket 05000000  
 50-269 Oconee Nuclear Station, Unit 1, Duke Power Co. 05000269  
 50-270 Oconee Nuclear Station, Unit 2, Duke Power Co. 05000270  
 50-289 Three Mile Island Nuclear Station, Unit 1, General Pu 05000289  
 50-369 William B. McGuire Nuclear Station, Unit 1, Duke Powe 05000369  
 50-370 William B. McGuire Nuclear Station, Unit 2, Duke Powe 05000370  
 50-413 Catawba Nuclear Station, Unit 1, Duke Power Co. 05000413  
 50-414 Catawba Nuclear Station, Unit 2, Duke Power Co. 05000414

AUTH. NAME TUCKER, H. B. AUTHOR AFFILIATION Duke Power Co.  
 RECIP. NAME RECIP. AFFILIATION Document Control Branch (Document Control Desk)

*With holdings granted*

SUBJECT: Forwards proprietary DPC-NE-3000, "Thermal-Hydraulic Transient Analysis Methodology," per Generic Ltr 83-11, "Licensee Qualification for Performing Safety Analyses...." Fee paid. Rept withheld (ref 10CFR2.790).  
*11/13/91*

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**DUKE POWER COMPANY**

P.O. BOX 33189  
CHARLOTTE, N.C. 28242

HAL B. TUGKER  
VICE PRESIDENT  
NUCLEAR PRODUCTION

TELEPHONE  
(704) 373-4531

September 29, 1987

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D.C. 20555

Subject: Oconee Nuclear Station  
Docket Nos. 50-269, -270, -289  
McGuire Nuclear Station  
Docket Nos. 50-369, -370  
Catawba Nuclear Station  
Docket Nos. 50-413, -414  
Thermal-Hydraulic Transient  
Analysis Methodology, DPC-NE-3000;  
Response to Generic Letter 83-11

Gentlemen:

On February 8, 1983, Generic Letter 83-11, "Licensee Qualification for Performing Safety Analyses in Support of Licensing Actions", was issued. The Duke Power Company response to this generic letter is submitted with the enclosed proprietary topical report DPC-NE-3000, "Thermal-Hydraulic Transient Analysis Methodology". Twenty-three copies are provided for your review. This report describes the development of thermal-hydraulic simulation models of the Oconee, McGuire, and Catawba Nuclear Stations using the RETRAN-02 and VIPRE-01 codes. These codes have received Safety Evaluation Reports following NRC review. The RETRAN plant simulation models have been extensively benchmarked against a broad spectrum of plant transient and test data. The VIPRE core thermal-hydraulic model for Oconee has been validated by comparison to the COBRA-IIIC/MIT code. The report also includes two examples of FSAR Chapter 15 analyses.

The objective of the report is to demonstrate the abilities of Duke Power Company to perform non-LOCA thermal-hydraulic transient analyses. These capabilities are intended for application toward the resolution of a wide range of safety and regulatory concerns. DPC-NE-3000 will be referenced as meeting the intent of Generic Letter 83-11.

In accordance with 10CFR 2.790, Duke Power Company requests that this report be considered proprietary. Information supporting this request is included in the attached affidavit. A non-proprietary version will be submitted following receipt of the Safety Evaluation Report.

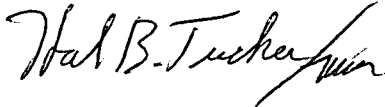
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September 29, 1987  
Page 2

Pursuant to 10CFR 170.12 an application fee check in the amount of \$150.00 is enclosed.

Very truly yours,



Hal B. Tucker

SAG/89/jgc

Attachment

xc: Dr. J. Nelson Grace, Regional Administrator  
U.S. Nuclear Regulatory Commission - Region II  
101 Marietta Street, Suite 2900  
Atlanta, Georgia 30323

Dr. K.N. Jabbour, Project Manager  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Ms. Helen Pastis, Project Manager  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Mr. Darl Hood, Project Manager  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Mr. P.K. Van Doorn  
NRC Resident Inspector  
Catawba Nuclear Station

Mr. W.T. Orders  
NRC Resident Inspector  
McGuire Nuclear Station

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

AFFIDAVIT OF RICHARD B. PRIORY

1. I am Vice President, Design Engineering Department of Duke Power Company ("Duke") and as such have the responsibility of reviewing the proprietary information sought to be withheld from public disclosure in connection with nuclear power plant licensing or rule-making proceedings, and am authorized to apply for its withholding on behalf of Duke.
2. I am making this affidavit in conformance with the provisions of 10 CFR §2.790 of the regulations of the Nuclear Regulatory Commission ("NRC") and in conjunction with Duke's application for withholding which accompanies this affidavit.
3. I have knowledge of the criteria used by Duke in designating information as proprietary or confidential.
4. Pursuant to the provisions of paragraph (b) (4) of 10 CFR §2.790, the following is furnished for consideration by the NRC in determining whether the information sought to be withheld from public disclosure should be withheld.
  - (i) The information sought to be withheld from public disclosure is owned by Duke and has been held in confidence by Duke and its consultants.
  - (ii) The information is of a type that would customarily be held in confidence by Duke. The information consists of analysis methodology details, analysis results, supporting data, and aspects of development programs, relative to a method of analysis that provides a competitive advantage to Duke.
    - (a) The use of the information by a competitor would greatly reduce its expenditure in qualifying similar methodologies.
    - (b) It reveals aspects of a methodology with potential commercial value to Duke Power.
  - (iii) The information was transmitted to the NRC in confidence and under the provisions of 10 CFR §2.790, it is to be received in confidence by the NRC.
  - (iv) The information sought to be protected is not available in public sources to the best of our knowledge and belief.

  
\_\_\_\_\_  
Richard B. Priory

(continued)


AFFIDAVIT OF RICHARD B. PRIORY (Page 2)

- (v) The proprietary information sought to be withheld in this submittal is that which is marked in the proprietary version of the report DPC-NE-3000, Thermal-Hydraulic Transient Analysis Methodology, and omitted from the non-proprietary version.

This information enables Duke to:

- (a) Respond to Generic Letter 83-11, "Licensee Qualification for Performing Safety Analyses in support of Licensing Actions."
  - (b) Respond to NRC requests for information regarding the transient response of Babcock & Wilcox and Westinghouse pressurized water reactors.
  - (c) Support license amendment and Technical Specification revision requests for Babcock & Wilcox and Westinghouse pressurized water reactors.
  - (d) Perform safety reviews per 10 CFR 50.59.
  - (e) Enhance operation of and training programs related to nuclear power plants.
- (vi) The proprietary information sought to be withheld from public disclosure has substantial commercial value to Duke.
- (a) It allows Duke to reduce vendor and consultant expenses associated with supporting the operation and licensing of nuclear power plants.
  - (b) Duke intends to sell the information to nuclear utilities, vendors and consultants for the purpose of supporting the operation and licensing of nuclear power plants.
  - (c) The subject information could only be duplicated by competitors at similar expense to that incurred by Duke.

5. Public disclosure of this information is likely to cause harm to the position of Duke because it would allow competitors in the nuclear industry to benefit from the results of a significant development program without requiring a commensurate expense or allowing Duke to recoup a portion of its expenditures or benefit from the sale of the information.

  
\_\_\_\_\_  
Richard B. Priory

(continued)

AFFIDAVIT OF RICHARD B. PRIORY (Page 3)

Richard B. Priory, being duly sworn, on his oath deposes and says that he is the person who subscribed his name to the foregoing statement, and that the matters and facts set forth in the statement are true.

RBPriory

Richard B. Priory

Sworn to and subscribed before me this 29th day of September, 1987.  
Witness my hand and official seal.

Sue C. Sherrill

Notary Public

My commission expires September 20, 1989

# PROPRIETARY INFORMATION

## NOTICE

THE ATTACHED DOCUMENT MAY CONTAIN "PROPRIETARY INFORMATION" AND SHOULD BE HANDLED AS NRC "OFFICIAL USE ONLY" INFORMATION. IT SHOULD NOT BE DISCUSSED OR MADE AVAILABLE TO ANY PERSON NOT REQUIRING SUCH INFORMATION IN THE CONDUCT OF OFFICIAL BUSINESS AND SHOULD BE STORED, TRANSFERRED, AND DISPOSED OF BY EACH RECIPIENT IN A MANNER WHICH WILL ASSURE THAT ITS CONTENTS ARE NOT MADE AVAILABLE TO UNAUTHORIZED PERSONS.

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# PROPRIETARY INFORMATION



DUKE POWER COMPANY

P.O. BOX 33189  
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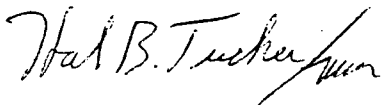
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Page 2

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Very truly yours,



Hal B. Tucker

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