



Duke Power
526 South Church Street
P.O. Box 1006
Charlotte, NC 28201-1006

August 3, 2001

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555-0001

Subject: Catawba Nuclear Station Units 1 and 2; Docket Nos. 50-413, 50-414
McGuire Nuclear Station Units 1 and 2; Docket Nos. 50-369, 50-370
Topical Report DPC-NE-1005P, Revision 0, *Nuclear Design Methodology Using CASMO-4/SIMULATE-3 MOX* (Proprietary)

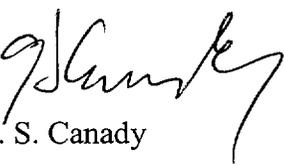
Submitted herewith is Duke Power (Duke) topical report, DPC-NE-1005P, *Nuclear Design Methodology Using CASMO-4/SIMULATE-3 MOX*, for NRC staff review and approval. This report presents updated models for calculating nuclear physics data for the McGuire and Catawba nuclear units. The report provides benchmark comparisons to operating data from McGuire and Catawba operating cycles. In addition, this report contains benchmark comparisons to data from critical experiments and to operating data from the Electricité de France (EDF) Saint Laurent B1 reactor with mixed cores of low enriched uranium and mixed oxide (MOX) fuel assemblies.

The methodology described in this report will be used initially for reactor physics calculations as part of the reload design process for uranium-fueled cores at McGuire and Catawba. Eventually, this methodology will be applied to mixed cores containing uranium and MOX fuel.

This report contains information that is proprietary to Duke, Framatome Advanced Nuclear Power, and EDF. In accordance with 10 CFR 2.790, Duke requests that this information be withheld from public disclosure. Affidavits are included from each of the three organizations that attest to the proprietary nature of the information in the report. The specific information that is proprietary to each organization is identified in the report. A non-proprietary version of this report will be submitted by separate cover letter.

It is requested that review and approval of this topical report be completed by August 31, 2002. Inquiries on this report should be directed to G. A Copp at (704) 373-5620.

Very truly yours,



K. S. Canady

Attachment

APOI

xc with attachment:

L. A. Reyes, Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
Atlanta Federal Center
61 Forsyth St., SW, Suite 23T85
Atlanta, GA 30303

C. P. Patel, NRC Senior Project Manager
U. S. Nuclear Regulatory Commission
Mail Stop O-8 G9
Washington, DC 20555-0001

S. M. Shaeffer
NRC Sr. Resident Inspector
McGuire Nuclear Station

D. J. Roberts
NRC Sr. Resident Inspector
Catawba Nuclear Station

xc with 5 copies of attachment:

R. E. Martin, NRC Senior Project Manager
U. S. Nuclear Regulatory Commission
Mail Stop O-8 G9
Washington, DC 20555-0001

bxo with attachment:

P. M. Abraham – EC08I
D. E. Bortz – EC08G
R. R. St Clair – EC08G
S. B. Thomas – EC08G
L. F. Vaughn – PB05E
J. L. Eller – EC09A
K. A. Naugle – EC09A
S. P. Nesbit – EC09A
R. H. Clark – WC32G
NRIA File/ELL – EC05O
McGuire Master File – MG01DM
Catawba Master File 801.01 – CN04DM
MOX File – 1607.3203

bxo w/o attachment:

C. J. Thomas - MG01RC
M. R. Wilder – EC05O
G. D. Gilbert – CN01RC
R. H. Clark – Duke Cogema Stone & Webster
A. V. Cottingham – Winston & Strawn
G. A. Meyer – Framatome Advanced Nuclear Power
Michel Ponticq – Electricité de France
K. S. Smith – Studsvik Scandpower, Inc.
P. T. Rhoads – Department of Energy
D. J. Spellman – Oak Ridge National Laboratory

AFFIDAVIT OF K. S. CANADY

- (a) I am Vice President of Duke Energy Corporation, and as such have the responsibility of reviewing the proprietary information sought to be withheld from public disclosure in connection with nuclear plant licensing and am authorized to apply for its withholding on behalf of Duke.
- (b) 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.
- (c) I have knowledge of the criteria used by Duke in designating information as proprietary or confidential.
- (d) 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.
- (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 to the best of our knowledge and belief.
- (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-1005, *Nuclear Design Methodology Using CASMO-4/SIMULATE-3 MOX*, and supporting documentation. This information enables Duke to:
- (a) Support license amendment and Technical Specification revision requests for its McGuire and Catawba reactors.

(Continued)


K. S. Canady

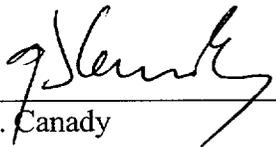
- (b) Perform nuclear design calculations on McGuire and Catawba reactor cores containing low enriched uranium fuel.
- (c) Perform nuclear design calculations on future planned McGuire and Catawba reactor cores containing a mixture of low enriched uranium and mixed oxide fuels.

(vi) The proprietary information sought to be withheld from public disclosure has substantial commercial value to Duke.

- (a) Duke uses this information to reduce vendor and consultant expenses associated with supporting the operation and licensing of nuclear power plants.
- (b) Duke can 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.

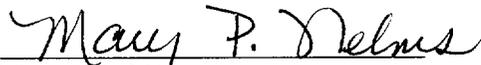
5. Public disclosure of this information is likely to cause harm to Duke because it would allow competitors in the nuclear industry to benefit from the results of a significant development program without requiring a commensurate expense or allowing Duke to recoup a portion of its expenditures or benefit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

K. S. Canady, 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.



K. S. Canady

Sworn to and subscribed before me this 3RD day of August, 2001.
Witness my hand and official seal.



Notary Public

My commission expires: JAN 22, 2006

SEAL

6. The following criteria are customarily applied by FRA-ANP to determine whether information should be classified as proprietary:

- (a) The information reveals details of FRA-ANP's research and development plans and programs or their results.
- (b) Use of the information by a competitor would permit the competitor to significantly reduce its expenditures, in time or resources, to design, produce, or market a similar product or service.
- (c) The information includes test data or analytical techniques concerning a process, methodology, or component, the application of which results in a competitive advantage for FRA-ANP.
- (d) The information reveals certain distinguishing aspects of a process, methodology, or component, the exclusive use of which provides a competitive advantage for FRA-ANP in product optimization or marketability.
- (e) The information is vital to a competitive advantage held by FRA-ANP, would be helpful to competitors to FRA-ANP, and would likely cause substantial harm to the competitive position of FRA-ANP.

7. In accordance with FRA-ANP's policies governing the protection and control of information, proprietary information contained in this Document has been made available, on a limited basis, to others outside FRA-ANP only as required and under suitable agreement providing for nondisclosure and limited use of the information.

8. FRA-ANP policy requires that proprietary information be kept in a secured file or area and distributed on a need-to-know basis.

9. The foregoing statements are true and correct to the best of my knowledge, information, and belief.

James M. Kelly

SUBSCRIBED before me this 26th
day of July, 2001.

Valerie W. Smith

Valerie W. Smith
NOTARY PUBLIC, STATE OF WASHINGTON
MY COMMISSION EXPIRES: 10/10/04



AFFIDAVIT OF Michel PONTICQ

1. My name is Michel PONTICQ. I am Head of the Nuclear Fuel Unit at Fuel Division of Electricité de France (EDF) and as such have the responsibility for reviewing information sought to be withheld from public disclosure in connection with nuclear power plant licensing; and am authorized on the part of EDF to apply for this withholding.
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 Energy Corporation's application for withholding, which accompanies this affidavit.
3. I have knowledge of the criteria used by EDF in designating information as proprietary or confidential.
4. Pursuant to the provisions of paragraph (b)(4) of 10CFR 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 EDF and has been held in confidence by EDF and its consultants.
 - (ii) The information is of a type that would customarily be held in confidence by EDF. The information consists of operating data for reactor cores with a mixture of mixed oxide and low enriched uranium fuel that were developed at significant cost to EDF and which provide a competitive advantage to EDF.
 - (iii) The information is to be transmitted to the NRC in confidence and under the provisions of 10CFR 2.790, and is to be received in confidence by the NRC.
 - (iv) The information sought to be protected is not available in public to the best of our knowledge and belief.
 - (v) The proprietary information sought to be withheld from public disclosure has substantial commercial value to EDF because the information:
 - (a) Is not available to other parties and would require substantial cost to develop independently,
 - (b) Has been sought by other parties in return for monetary payment,
 - (c) Consists of reactor operating data, which is not readily available to others and therefore has value to EDF,

5. Public disclosure of this information is likely to cause harm to EDF because it would allow other competitors in the nuclear industry to benefit from the results of an extensive reactor monitoring and measurement program without requiring commensurate expense or allowing EDF to recoup a portion of its expenditures or benefit from the sale of the information.

Michel PONTICQ, being duly sworn, states that he is the person who subscribed his name to the foregoing statement, and that all the matters and facts set forth within are true and correct to the best of his knowledge.

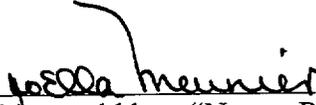
 [Signature of Official/Officer]

Michel PONTICQ
EDF Industry – Fuel Division
Head of the Nuclear Fuel Unit

Subscribed and sworn to before me on this 19 thday of

june, 2001

JO ELA MEUNIER
NOTARY PUBLIC STATE OF MARYLAND
My Commission Expires July 8, 2002

 [Name of Person Certifying Signature],
[This would be a "Notary Public" in United States]

SEAL [of Person Certifying Signature]
My Commission Expires:

07/08/02 [Date of expiration]