

Mr. M. S. Tuckman
Senior Vice President
Nuclear Generation
Duke Power Company
P.O. Box 1006
Charlotte, NC 28201

April 26, 1996

SUBJECT: SAFETY EVALUATION - NUCLEAR DESIGN METHODOLOGY USING CASMO-3/SIMULATE-3P, DPC-NE-1004A, CATAWBA NUCLEAR STATION, UNITS 1 AND 2 MCGUIRE NUCLEAR STATION, UNITS 1 AND 2, (TAC NOS. M94403 AND M94404)

Dear Mr. Tuckman:

On December 12, 1995, and as supplemented on April 9, 1996, you submitted a proposed revision to the approved Topical Report, "Nuclear Design Methodology Using CASMO-3/SIMULATE-3P," DPC-NE-1004A, November 1992. Specifically, Duke Power Company requested review of an effort to improve its reload design methods. The CASMO-3/SIMULATE-3P power distribution uncertainty factors have been re-evaluated using measured data from recent Catawba and McGuire fuel cycles. The revision includes increasing the axial nodes in SIMULATE-3P from 12 axial nodes to 24 axial nodes. This change in the number of nodes structure will allow explicit modeling of axial blanket fuel segments.

We have completed our evaluation and find this change to be acceptable. Our evaluation is provided in the enclosure.

Sincerely,

Original signed by:

Robert E. Martin, Senior Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-413 and 50-414
50-369 and 50-370

Enclosure: Safety Evaluation

cc w/encl: See next page

DISTRIBUTION

Docket File
PUBLIC
PDII-2 Reading
J. Zwolinski
S. Varga
OGC
ACRS (4)
R. Crlenjak, RII
E. Merschhoff, RII
T. Attard

9604300306 960426
PDR ADOCK 05000369
P PDR

300029

AFOL
11

DOCUMENT NAME: G:\CATAWBA\CAT94403.SER

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	LA:PD22:DRPE	E	PM:PD22:DRPE	D:PD22:DRPE	PM:PD22:DRPE		
NAME	LBerry	RMartin	Hankow	VNerses			
DATE	1/96	4/24/96	4/26/96	4/26/96			

OFFICIAL RECORD COPY

NRC FILE CENTER COPY



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

April 26, 1996

Mr. M. S. Tuckman
Senior Vice President
Nuclear Generation
Duke Power Company
P.O. Box 1006
Charlotte, NC 28201

SUBJECT: SAFETY EVALUATION - NUCLEAR DESIGN METHODOLOGY USING CASMO-3/SIMULATE-3P, DPC-NE-1004A, CATAWBA NUCLEAR STATION, UNITS 1 AND 2 MCGUIRE NUCLEAR STATION, UNITS 1 AND 2, (TAC NOS. M94403 AND M94404)

Dear Mr. Tuckman:

On December 12, 1995, and as supplemented on April 9, 1996, you submitted a proposed revision to the approved Topical Report, "Nuclear Design Methodology Using CASMO-3/SIMULATE-3P," DPC-NE-1004A, November 1992. Specifically, Duke Power Company requested review of an effort to improve its reload design methods. The CASMO-3/SIMULATE-3P power distribution uncertainty factors have been re-evaluated using measured data from recent Catawba and McGuire fuel cycles. The revision includes increasing the axial nodes in SIMULATE-3P from 12 axial nodes to 24 axial nodes. This change in the number of nodes structure will allow explicit modeling of axial blanket fuel segments.

We have completed our evaluation and find this change to be acceptable. Our evaluation is provided in the enclosure.

Sincerely,

A handwritten signature in cursive script that reads "Robert E. Martin".

Robert E. Martin, Senior Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-413 and 50-414
50-369 and 50-370

Enclosure: Safety Evaluation

cc w/encl: See next page

Duke Power Company

cc:

Mr. Paul R. Newton
Legal Department (PB05E)
Duke Power Company
422 South Church Street
Charlotte, North Carolina 28242-0001

County Manager of Mecklenburg County
720 East Fourth Street
Charlotte, North Carolina 28202

Mr. J. E. Snyder
Regulatory Compliance Manager
Duke Power Company
McGuire Nuclear Site
12700 Hagers Ferry Road
Huntersville, North Carolina 28078

J. Michael McGarry, III, Esquire
Winston and Strawn
1400 L Street, NW.
Washington, DC 20005

Senior Resident Inspector
c/o U. S. Nuclear Regulatory
Commission
12700 Hagers Ferry Road
Huntersville, North Carolina 28078

Mr. Peter R. Harden, IV
Account Sales Manager
Westinghouse Electric Corporation
Power Systems Field Sales
P. O. Box 7288
Charlotte, North Carolina 28241

Dr. John M. Barry
Mecklenburg County
Department of Environmental
Protection
700 N. Tryon Street
Charlotte, North Carolina 28202

McGuire Nuclear Station
Catawba Nuclear Station

Mr. Dayne H. Brown, Director
Department of Environmental,
Health and Natural Resources
Division of Radiation Protection
P. O. Box 27687
Raleigh, North Carolina 27611-7687

Ms. Karen E. Long
Assistant Attorney General
North Carolina Department of
Justice
P. O. Box 629
Raleigh, North Carolina 27602

Mr. G. A. Copp
Licensing - EC050
Duke Power Company
526 South Church Street
Charlotte, North Carolina 28242-0001

Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
101 Marietta Street, NW. Suite 2900
Atlanta, Georgia 30323

Elaine Wathen
Lead REP Planner
Division of Emergency Management
116 West Jones Street
Raleigh, North Carolina 27603-1335

Mr. T. Richard Puryear
Owners Group (NCEMC)
Duke Power Company
4800 Concord Road
York, South Carolina 29745

Duke Power Company

McGuire Nuclear Station
Catawba Nuclear Station

cc:

Mr. M. S. Kitlan
Regulatory Compliance Manager
Duke Power Company
4800 Concord Road
York, South Carolina 29745

North Carolina Electric Membership
Corporation
P. O. Box 27306
Raleigh, North Carolina 27611

North Carolina Municipal Power
Agency Number 1
1427 Meadowwood Boulevard
P. O. Box 29513
Raleigh, North Carolina 27626-0513

Senior Resident Inspector
4830 Concord Road
York, South Carolina 29745

County Manager of York County
York County Courthouse
York, South Carolina 29745

Mr. William R. McCollum
Site Vice President
Catawba Nuclear Station
Duke Power Company
4800 Concord Road
York, South Carolina 29745

Richard P. Wilson, Esquire
Assistant Attorney General
South Carolina Attorney General's
Office
P. O. Box 11549
Columbia, South Carolina 29211

Mr. T. C. McMeekin
Vice President, McGuire Site
Duke Power Company
12700 Hagers Ferry Road
Huntersville, North Carolina 28078

Piedmont Municipal Power Agency
121 Village Drive
Greer, South Carolina 29651

Saluda River Electric
P. O. Box 929
Laurens, South Carolina 29360

Max Batavia, Chief
Bureau of Radiological Health
South Carolina Department of
Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201