



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

October 16, 1989

Docket Nos. 50-413
and 50-414

Mr. H. B. Tucker, Vice President
Nuclear Production Department
Duke Power Company
422 South Church Street
Charlotte, North Carolina 28242

Dear Mr. Tucker:

SUBJECT: TMI ACTION ITEM II.K.3.31, CATAWBA NUCLEAR STATION, UNITS 1 AND 2
(TACS 63018/63019)

TMI Action Item II.K.3.30 of NUREG-0737 outlines the Commission requirements for the industry to demonstrate that its small break loss of coolant accident (LOCA) methods continue to comply with the requirements of Appendix K to 10 CFR 50. The technical issues to be addressed were listed in NUREG-0611 including comparison with semiscale experimental test results. In response to Item II.K.3.30, the Westinghouse Owners Group (WOG) elected to reference the NOTRUMP code as the new licensing basis for the small break LOCA model. The NOTRUMP code and methodology are described in two proprietary Topical Reports, WCAP-10079 and WCAP-10054. The non-proprietary versions of these reports are WCAP-10080 and WCAP-10081, respectively. On May 21, 1985, the NRC staff reviewed and approved NOTRUMP as the new licensing tool for calculating small break LOCA response for Westinghouse plant designs. The staff further concluded that the WOG had met the requirements of Item II.K.3.30. By letter dated June 26, 1985, the NRC staff acknowledged that Duke Power Company is a member of the WOG and that the Commission's generic acceptance of NOTRUMP was, therefore, applicable to the Catawba Nuclear Station.

Referencing the new computer code did not imply deficiencies in the WFLASH code (which was previously utilized for small break LOCA analysis) such that the code did not comply with Appendix K to 10 CFR 50. The decision to use NOTRUMP was based on desires of the industry to perform licensing evaluations with a computer program specifically designed to calculate small break LOCAs with greater phenomenological accuracy than capable by WFLASH.

TMI Action Item II.K.3.31 required that each license holder or applicant submit a new small break analysis using the model approved under II.K.3.30. NRC Generic Letter 83-35 provided clarification for the II.K.3.31 requirements by allowing license holders and applicants to comply on a generic basis by demonstrating that the WFLASH analyses are conservative when compared to analyses performed using NOTRUMP.

8910240007 891016
PDR ADIACK 05000413
P PDC

JFol
1/0

In response to this guidance, the Westinghouse owners submitted WCAP-11145 which contains generic comparisons to WFLASH analyses for various plant types. These include comparisons for 4-loop plants of the Catawba Units 1 and 2 design. If plant specific analyses were performed for Catawba Units 1 and 2 using NOTRUMP, lower peak clad temperatures should be expected in comparison with the generic NOTRUMP analysis.

The NRC staff review of WCAP-11145 has been completed and accepted as a licensing basis for small break LOCA analysis. By letter dated July 1, 1986, you referenced WCAP-11145 (which consists of the results from calculations using approved methodology) in lieu of submitting a plant specific analysis. This action meets the criteria as stated in NRC Generic Letter 83-35 dated November 2, 1983. The staff, therefore, concludes that the Catawba Nuclear Station, Units 1 and 2, Final Safety Analysis Report analyses of a small break LOCA have been demonstrated to be conservative in comparison with the NOTRUMP Evaluation Model. This meets the requirements of II.K.3.31 and 10 CFR 50.46 for Catawba Units 1 and 2.

Sincerely,

Original signed by:

Kahtan N. Jabbour, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

cc:
See next page

Distribution:

Docket File

NRC & Local PDRs

PDII-3 R/F

S. Varga 14/E/4

G. Lainas 14/H/3

D. Matthews

R. Ingram

K. Jabbour

OGC (info. only)

E. Jordan MNBB 3302

B. Grimes 9/A/2

D. Wigginton 13/D/18

ACRS (10) P 315

Catawba R/F

[CATAWBA TMI IIK331]

M
10/11/89

KNT
LA:PDII-3

RIngram

10/11/89

KNT
PM:PDII-3

KJabbour:sa

10/11/89

tw
ABC:SRXB

RJones

10/11/89

DSH
D:PDII-3

DMatthews

10/11/89

Mr. H. B. Tucker
Duke Power Company

Catawba Nuclear Station

cc:

A.V. Carr, Esq.
Duke Power Company
422 South Church Street
Charlotte, North Carolina 28242

J. Michael McCarry, III, Esq.
Bishop, Cook, Purcell and Reynolds
1400 L Street, N.W.
Washington, D. C. 20005

North Carolina MPA-1
Suite 600
3100 Smoketree Ct.
P.O. Box 29513
Raleigh, North Carolina 27626-0513

Ms. S. S. Kilborn
Area Manager, Mid-South Area
ESSD Projects
Westinghouse Electric Corp.
MNC West Tower - Bay 239
P.O. Box 355
Pittsburgh, Pennsylvania 15230

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

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

Piedmont Municipal Power Agency
100 Memorial Drive
Creer, South Carolina 29651

Mr. Alan R. Herdt, Chief
Project Branch #3
U.S. Nuclear Regulatory Commission
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

North Carolina Electric Membership
Corp.
3400 Sumner Boulevard
P.O. Box 27306
Raleigh, North Carolina 27611

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

Senior Resident Inspector
Route 2, Box 179N
York, South Carolina 29745

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

Mr. Heyward G. Shealy, Chief
Bureau of Radiological Health
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

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

Mr. Peter G. LeRoy
Nuclear Production Department
Duke Power Company
P.O. Box 33189
Charlotte, North Carolina 28241