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AUTH. NAME AUTHOR AFFILIATION
 TUCKER, H.B. Duke Power Co.
 RECIP. NAME RECIPIENT AFFILIATION
 EBNETER, S.D. Region 2, Ofc of the Director

SUBJECT: Summarizes status of util actions in response to NRC Bulletin 85-003.

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DUKE POWER COMPANY

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

HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

TELEPHONE
(704) 373-4531

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March 23, 1989

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

Subject: Catawba Nuclear Station
McGuire Nuclear Station
Oconee Nuclear Station
Docket Nos. 50-413, -414; 50-369, -370; 50-269, -270, -287
NRC Bulletin No. 85-03
Motor-Operated Valve Common Mode Failures During Plant
Transients Due to Improper Switch Settings
Action Item f Reports/Differential Test Plan

Dear Mr. Ebnetter:

This letter is to advise you of the status of Duke Power Company's actions/response to NRC Bulletin No. 85-03 for the Catawba, McGuire, and Oconee Nuclear Stations, and to delay the Catawba Unit 1 Response/Differential Test Plan which was due today.

Mr. J. M. Taylor's (NRC/OIE) November 15, 1985 letter (Bulletin 85-03) concerned motor-operated valve (MOV) common mode failures during plant transients due to improper switch settings. The purpose of this bulletin was to request licensees to develop and implement a program to ensure that switch settings on certain safety-related motor-operated valves are selected, set and maintained correctly to accommodate the maximum differential pressures expected on these valves during both normal and abnormal events within the design basis. This action was to include the components (i.e. Action Items a-d) outlined in the bulletin. In addition to the development and implementation of the above program, various reports were required to be submitted to the NRC (Action Items e and f). The Action Item e Report was to provide the results of Action Item a and contain the program to accomplish Action Items b-d including a schedule for completion of those items. The Action Item f report was to provide (1) a verification of completion of the requested program, (2) a summary of the findings as to valve operability prior to any adjustments as a result of the bulletin, and (3) a summary of data in accordance with Table 2, "Suggested Data Summary Format".

Consequently, on May 16, 1986, I submitted a report (as directed by Bulletin Action Item e) outlining our plan to accomplish the requested program by November 15, 1987. Subsequently, my November 20, 1986 letter discussed a Duke Power Company commitment to an expanded scope for our MOV Improvement Program. This expansion of scope was based on Duke's in-house investigation initiated in response to Bulletin 85-03. The scope change included all safety-related MOVs that are required to be tested for operational readiness rather than just the Bulletin 85-03 identified MOVs. By my February 18, 1987 letter, I provided the

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schedule for completion of this operational verification program commitment on all Safety-Related MOVs for each unit (five refueling outages per unit at McGuire and Catawba and three at Oconee are required to complete the comprehensive program to ensure safety-related MOV operability is maintained for the life of the station). In addition, the February 18, 1987 letter extended our original commitment to complete all actions required by Bulletin 85-03 for the McGuire and Catawba Nuclear Stations from the bulletin required date of November 15, 1987 to the (EOC) 5 refueling outage (RFO) for McGuire Unit 1 and the EOC 4 RFO for McGuire Unit 2 and the EOC 3 RFO for Catawba Unit 1 and the EOC 2 RFO for Catawba Unit 2 (generally an extension of one refueling outage), with the Oconee Nuclear Station to meet the original commitment schedule. The submittal of the Bulletin required Action Item f report(s) following completion of the program on each McGuire and Catawba unit was also adjusted appropriately. Accordingly, reports which satisfied the requirements of bulletin Action Item f for the Oconee and McGuire Nuclear Stations were submitted by my letters of January 14, 1988 and March 1, 1989, with the reports for Catawba Unit 1 due March 23, 1989 and Catawba Unit 2 due approximately July 10, 1989. Additional information regarding Bulletin 85-03 with respect to the McGuire, Catawba, and/or Oconee Nuclear Stations was also submitted via letters dated September 29, 1987, April 22, 1988, and May 2, 1988.

Item c of the Bulletin requires licensees to implement and verify their methodology for establishing motor operated valve (MOV) switch settings (torque, position limit and thermal overload). To meet this objective, Duke Power established a program to set MOV torque switches according to thrust/torque values supplied by the original equipment manufacturer (OEM). A margin and tolerance were added to these values for field set-up purposes with the upper value not to exceed the stress limits for the valve-actuator assembly. As discussed in a June 2, 1988 Teleconference between Mr. P. B. Nardoci et.al. (DPC) and Mr. R. J. Kiessel et.al. (NRC/OIE), the factors used in these OEM equations were then to be validated in the future through limited instrumented differential pressure testing. Per Duke's commitment in that telecon, the details of this differential test plan and approach for the three stations are to be submitted to the NRC as a supplemental bulletin response, with final bulletin responses to be submitted upon completion of the testing.

Toward this end, differential pressure testing was performed on Catawba MOV Design Item number 6J-219 (Bulletin MOVs 1, 2CA-38, 42, 46, 50, 54, 58, 62 and 66) both at the Riverbend flow loop and in-plant at Catawba on valves 2CA-42, 46, 58 and 62. The test results yielded factors over twice as high as those supplied by the OEM. Actions were taken to administratively control the potential for the valves which do not receive automatic signals not to fully close. In addition, the worst case differential pressure was lowered from 2000 psi to 1425 psi. Only valves 1, 2CA-46 and 58 receive automatic signals for closure on CA pump run-out so they are the ones of primary concern. As a result of the findings for the 6J-219 valve, action is now being taken to accelerate the differential pressure testing for safety related valves of similar design to ensure there is not a generic sizing problem with this design. Similar valve 9J-202 (1, 2NI-9 and 10) was tested at the Riverbend flow loop on March 22, 1989. Preliminary results from this testing appear to be yielding factors more in line with the OEM equations. Additional differential pressure testing is planned at Catawba 2 for similar valve designs during the ECCS flow test (April 12-15, 1989).

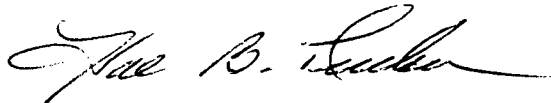
Mr. S. D. Ebnetter
March 23, 1989
Page Three

Although the Catawba Unit 1 Action Item f report is currently due, to issue a report appears to be premature at this time in light of the recent differential pressure testing developments. Therefore, Duke intends to delay the Catawba Unit 1 Action Item f Report submittal until the Catawba Unit 2 Action Item f Report due date (60 days after the EOC 2 RFO, approximately July 10, 1989), at which time a report covering both units will be provided (similar to what was done for Oconee and McGuire). Delaying the report will enable Duke to submit a stronger response by incorporating differential pressure test data for at least a portion of the bulletin valves. The differential test plan and approach (supplemental bulletin response) for Oconee and McGuire as well as Catawba will also be provided at that time.

It should be noted that the above Catawba differential pressure testing developments also may impact Oconee and McGuire, as those stations also have valves of similar design to 6J-219. These matters will be addressed in the committed to final bulletin response submittals for those stations upon completion of the testing.

I declare under penalty of perjury that the statements set forth herein are true and correct to the best of my knowledge. Should there be any questions concerning this matter or if additional information is required, please advise.

Very truly yours,



Hal B. Tucker

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Mr. S. D. Ebnetter
March 23, 1989
Page Four

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

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

Mr. S. Tingen
U. S. Nuclear Regulatory Commission
Region II
101 Marietta St., NW, Suite 2900
Atlanta, Georgia 30323

Mr. T. A. Triggani, Project Manager
Westinghouse Owners Group
c/o Westinghouse Electric Corporation
Nuclear Services Integration Division
Box 2728
Pittsburgh, PA 15230-2728

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

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

Mr. D. B. Matthews
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

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

Mr. P. H. Skinner
NRC Resident Inspector
Oconee Nuclear Station