



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 78 TO FACILITY OPERATING LICENSE NPF-9  
AND AMENDMENT NO. 59 TO FACILITY OPERATING LICENSE NPF-17

DUKE POWER COMPANY

DOCKET NOS. 50-369 AND 50-370

McGUIRE NUCLEAR STATION, UNITS 1 AND 2

I. INTRODUCTION

In NRC Inspection Reports Nos. 50-369/85-38 and 50-370/85-39, dated June 27, 1986, the staff identified concerns involving the McGuire Units 1 and 2 nuclear service water (RN) system. One of these concerns related to the Technical Specifications (TS) for the RN system, TS 3.4.7.4, which did not indicate the shared aspects of the McGuire RN system. A Notice of Violation and Proposed Imposition of Civil Penalty (Notice) was subsequently transmitted (Enforcement Action 87-07) to Duke Power Company (the licensee) on March 6, 1987. Item B of that Notice concerned the fact that the licensee, contrary to TS 3/4.7.4, cross-connected the 1A and 2A trains of the McGuire RN system based on an incorrect 10 CFR 50.59 evaluation. By letter dated April 3, 1987, the licensee responded to Enforcement Action 87-07 and committed to revise the RN system TS to reflect the shared aspects.

By letter dated July 31, 1987, the licensee proposed license amendments to revise the RN system TS accordingly. The proposed license amendments revise the action statement of the RN system TS to reflect that some portions of the RN system are shared between the two units, but the system is not shared in its entirety. The shared and unshared portions of the RN system would be specifically identified in the TS by adding Figure 3/4 7-1 to the specifications and adding new text to the Bases Section in addition to Table B 3/4 7-1 which lists the Unit 1 and 2 shared valves. The proposed amendments would also clarify the related surveillance requirement which is intended to be applied on a "per unit" basis.

II. EVALUATION

The revision to the ACTION Section of TS 3/4.7.4 includes separate statements to clarify the actions and allowable outage times for the situations in which an inoperable component affects a single unit or both units. The previous action statement required that with only one RN loop OPERABLE, two loops were to be OPERABLE within 72 hours or the plant was to be in at least hot standby within the next 6 hours, and in cold shutdown within the following 30 hours. The first action statement, item (a) of the revised specification, is basically the same as the previous except that it requires the ACTION to be taken when the unit specific portion of only one RN loop is OPERABLE and requires that both unit specific loops be returned to OPERABLE status. The action statement,

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therefore, applies to only one unit. The second action statement, item (b) of the revised specification, addresses the shared portions of the RN system as defined by the new Figure 3/4 7-1. It requires that with only one of the shared portions of the loop OPERABLE, both portions are to be returned to an OPERABLE status within 72 hours or both units are to be in hot standby within the next 6 hours and in cold shutdown within the following 30 hours.

In addition to the new action statements, the amendments also revise the surveillance requirements to state that at least two RN loops "per unit" shall be demonstrated OPERABLE. The previous surveillance requirements did not specify "per unit." The BASES Section of the Technical Specifications is also revised to reflect the shared aspects of the system.

The revised action statements include the same time requirements (6 hours for hot standby and 30 hours for cold shutdown) as the previous TS. The revision is to assure that whenever a shared portion of the RN system is inoperable, both units are affected by the action statement. The design of the RN system meets the requirements of General Design Criterion (GDC) 5, "Sharing of Structures, Systems and Components" in that no single failure will prevent the RN system from performing its safety function, including, in the event of an accident in one unit, an orderly shutdown and cooldown of the other unit. However, the previous TS 3/4.7.4 could have been interpreted in a manner which would indicate that GDC 5 could be violated in the event of certain equipment failures if the action statement was not applied to both units. The revised TS 3/4.7.4 ensures that GDC 5 will be met by specifically identifying which portions of the RN system are shared and under what conditions the action statement should be applied to both units.

During its review of the licensee's submittal, the staff noted a labeling discrepancy between Table B 3/4 7-1 and Figure 3/4 7-1. In the table, the valve in the low level intake supply lines to the RN system was labeled ORN-1 while the valve of interest on the drawing did not have an identifying number. Also in the table the valves identified as ORN-3A, C, ORN-7A, C and ORN-150A, C did not have the "C" designation in Figure 3/4 7-1. Because these letters "A" and "C" have power supply connotations and since the figure is to be part of the TS, the staff concluded it should be corrected to agree with Table B 3/4 7-1. In a subsequent discussion with the licensee, the licensee agreed that the proposed TS Figure 3/4 7-1 should be revised such that the valves numbered 3A, 7A and 150A become 3A, C; 7A, C and 150A, C while the single unnumbered valve between the low level intake and the RN system should be designated 1, to agree with Table B 3/4 7-1 where it is identified as ORN-1. Therefore, these administrative changes have been made.

Accordingly, the staff has reviewed the revision to TS 3/4.7.4 and its bases B 3/4.7.4 along with the licensee's justification and safety analysis related to the revision. Based on its review, the staff concludes that the revision, which is primarily a clarification, properly reflects the shared and unshared aspects of the nuclear service water system and adequately specifies when the action statement for the limiting conditions for operation should apply to both units. The revision, thereby, assures that the McGuire nuclear service water system will be operated in accordance with GDC 5, as it relates to sharing of safety related equipment. The staff, therefore, concludes that the revision is acceptable.

### III. ENVIRONMENTAL CONSIDERATION

These amendments involve changes to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20 and clarification of a surveillance requirement. The staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational exposure. The NRC staff has made a determination that the amendments involve no significant hazards consideration, and there has been no public comment on such finding. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of these amendments.

### IV. CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register (52 FR 34003) on September 9, 1987. The administrative change subsequently made by the NRC staff regarding the labeling of certain valves in TS Figure 3/4 7-1 does not change this determination or its basis. The Commission consulted with the state of North Carolina. No public comments were received, and the state of North Carolina did not have any comments.

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

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Dated: January 4, 1988

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AMENDMENT NO. 78 TO FACILITY OPERATING LICENSE NPF-9 - McGuire Nuclear Station, Unit 1  
AMENDMENT NO. 59 TO FACILITY OPERATING LICENSE NPF-17 - McGuire Nuclear Station, Unit 2

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