

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

January 7, 1987

Artet

Decket Nos.: 50-369 and 50-370

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

Dear Mr. Tucker:

SUBJECT: REQUEST FOR PROPOSED CHANGE TO TECHNICAL SPECIFICATION 3/4.7.7, "AUXILIARY BUILDING FILTERED VENTILATION EXHAUST SYSTEM," MCGUIRE NUCLEAR STATION, UNITS 1 AND 2

By letter dated September 16, 1985, you requested that the Action Statement to McGuire Technical Specification 3/4.7.7, "Auxiliary Building Ventilation Exhaust (VA) System" be modified to allow one system to be inoperable for 7 days, instead of the current 24 hour time limit. In support of this request, you noted that while there is only one VA system per McGuire unit, redundancy could be met through the VA system in the other unit because: (1) each system has its air intake in the same general open areas of the auxiliary building; (2) each VA system, while not of equivalent capacity, is capable of maintaining the auxiliary building at a negative pressure; (3) following a LOCA on either reactor, both VA systems start automatically; and (4) both VA systems have a diversity of power sources. You also indicated that these systems are not required to reduce the consequences of ECCS pump room leakage in order to meet 10 CFR Part 100 dose criteria following a design basis LOCA.

The NRC's evaluation of the radiological consequences of a design basis LOCA included an assumption of leakage associated with a gross failure of a passive component pursuant to Standard Review Plan Section 15.6.5, Appendix B. We, thus, found that the VA system was necessary to mitigate the consequences of a LOCA. In order to have some confidence that either VA system could fulfill the redundancy requirements, you were requested in our December 20, 1985 letter to provide additional data justifying that the VA system of lower flow capacity (43,400 cfm) could independently establish negative pressure for those areas normally serviced by the 54,282 cfm VA system. We also requested that you provide additional data justifying that either VA system could provide sufficient cooling to the cubicles of the other unit's equipment even for the lower capacity rated VA system.

On September 2, 1983, Duke Power Company first requested relief from the 24 hour LCO when the charcoal in the Unit 1 VA system failed the acceptance criteria. The requested relief was granted October 6, 1983 by license amendment 24. On September 20, 1985, you again requested emergency relief from the 24 hour LCO of the technical specification on the VA system because the Unit 1 VA system had been declared inoperable due to the failure of a carbon sample to pass the acceptance criteria. However, the system was subsequently retested and declared operable prior to the end of the 24 hour limit.

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January 7, 1987

Discretionary enforcement was requested due to failure of the Unit 2 carbon filter samples on September 23, 1986. This enforcement was granted based on certain information that was supplied by Duke Power Compary and a stipulation that Duke Power Company make efforts to demonstrate that the VA system for either unit be able to achieve a negative pressure of 0.25 inches of water gauge (V.G.) relative to the atmosphere. You agreed to provide a plan by October 7, 1986 describing this performance goal.

In addition, you committed in your September 25, 1986 letter to address those items of additional information requested by NRC letters dated November 29, 1985 and December 20, 1985; NRC inspection reports 50-369/86-01 and 50-370/86-01 and 50-370/86-40; concerns raised in the June 19, 1986 SALP Beard Report; and those items raised during discussions of September 23 and 24, 1986, on the temporary waiver request.

Your October 9, 1986 letter transmitted some of the information requested by the staff. In this transmittal you indicated:

- (1) that while Duke Power Company will strive to meet the 0.25 inch W.G. negative pressure in the auxiliary building when tested in 18 month intervals, the licensing basis of the plant is that the VA system is designed to maintain the auxiliary building slightly negative. Any significant degradation would be evaluated by Duke but the 0.25 inch W.G. limit would not be considered an acceptance criterion for system operability and any NRC attempt to impose such a limit would be considered a backfit subject to 10 CFR 50.109;
- (2) that the VA system is not considered necessary to remove heat in order to mitigate the consequences of an accident and while the estimated building temperature is expected to reach 135°F and that temperature exceeds the temperature established for continuous operation of some essential equipment, a temporary excursion to this level is considered acceptable; and
- (3) that the McGuire VA system contains inherent features which will limit the influent relative humidity to approximately 70% under all postulated conditions. Any desired NRC design changes (e.g., heaters) to improve effective sustained operation during humid conditions should be pursued through the backfit rule.

Based on the staff's review of the information that you have provided, the technical specification change is denied. Our denial is based on the following considerations:

(1) You are apparently unwilling to commit to a periodic surveillance test to demonstrate that either VA system will ensure releases to the auxiliary building ECCS areas will be processed by filters prior to release to the environment. The staff acceptance criterion for this is a demonstration through periodic testing, of meeting 0.25 inches W.G. negative pressure in these areas. You state that any staff attempt to implement the 0.25 inch W.G. limit in the technical specification would be a backfit. The staff

disagrees that this denial constitutes a backfit. First, no charge is imposed on the existing design or technical specification. The issue of a criterion is raised only in regard to a request for change. Such change involves considerations not previously reviewed by the NRC staff. Second, you requested the change based on the claim that each of the VA systems could be considered redundant to the other. The existing LCO/Action Statements are based on a system design involving a single VA system for each unit. The request to utilize a 7-day LCO/Action Statement is a request to utilize an LCO/Action Statement appropriate to a VA system designed with redundant trains for each unit. However, the configuration of the McGuire VA system does not support a finding of true redundancy because each VA system has only one train. McGuire ventilation system suctions for each of the VA systems are in the ECCS pump rooms of that unit, not in the adjoining unit's ECCS pump rooms. Therefore, there is doubt that adequate suction can be achieved in the adjacent pump room. Without a demonstration of 0.25 inch W.G. negative pressure there is inadequate assurance that a single train will provide adeouate suction to collect leakage from the adjacent pump room. Duke proposed no other pressure criterion (other than "any" negative pressure) and does not provide for uncertainty factors such as wind which can adversely affect system function with a single VA train.

- (2) The systems must be able to provide sufficient cooling to the post-accident equipment in the adjoining unit. Appropriate justification was not provided by Duke Power Company to support its claim that although the estimated building temperature could reach 135°F and that temperature exceeds the temperature established for continuous operation of some essential equipment, that the excursion to this level is considered acceptable, nor was any demonstration provided.
- (3) Finally, you did not describe the inherent features which will limit the influent relative humidity to approximately 70% under all postulated conditions, nor any data which show that the charcoal does not become saturated during high humidity conditions. Hence, we remain concerned about the reliability of a single VA train for the McGuire design (i.e., one filter pack per McGuire unit) to accomplish its post-accident (iodine removal) function, especially after a period of prior operation. Therefore, we believe that the period of dependency upon a single filter pack is appropriately limited by the present McGuire technical specification.

Accordingly, existing Tochnical Specification 3/4.7.7 remains in effect and no further review is planned regarding your request for change.

Mr. H:B. Tucker

Enclosed is a copy of a related notice which has been forwarded to the Office of the Federal Register for publication.

Sincerely,

151

Darl Hood, Project Manager PWR Project Directorate #4 Division of PWR Licensing-A

Enclosure: As stated cc: See next page

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