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

NOV 2 9 1985

Docket 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: Auxiliary Building Filtered Ventilation System Testing,
McGuire Nuclear Station, Unit 1

We have reviewed your letter of October 28, 1985, which addressed the NRC inspection of the McGuire Station's auxiliary building filtered ventilation (VA) system and the lack of a pre-operational air distribution test for the system. We also reviewed the attachments to your letter which addressed the Unit 1 test procedures, its acceptance criteria and test results.

In view of the fact that greater than 98% of the air distribution measurements were within the acceptance criteria of ± 20% and the few failures fell only marginally outside the criteria, we conclude that the air flow distribution through the HEPA filters and carbon beds of both VA units is suitably uniform and the units should be considered to be operable.

For future reference, the acceptance test criteria for the charcoal adsorber air distribution measurements should be based upon a comparison of each individual measurement with the average of all measurements, not the average of all slot measurements compared to each vertical slot's average. Also, staff experience with hot-wire anemometers indicates that they are subject to relatively large measurement error under turbulent flow conditions. Consideration should be given to use of a pitot tube or a vane anemometer for future tests.

Duke has volunteered to provide additional assurance on the adequacy of the carbon by performing an additional laboratory test. However, we wish to emphasize that the temperature at which these tests are conducted is of greater concern to the NRC staff than is the lack of uniform flow. Technical Specifications 3/4.7.7 for McGuire, Units 1 and 2, involve Revision 2 of Regulatory Guide 1.52 and, therefore, specify a laboratory test temperature of 80°C for this system. Recent studies have shown this to be inappropriately high for air cleaning systems which are not expected to be subjected to elevated temperatures and will result in erroneous indications of charcoal quality. Effort is underway generically to standardize on a test temperature of 30°C

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McGuire Nuclear Station

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for such systems. Several utilities have volunteered to revise their technical specifications and adopt the 30°C test temperature in order to assure a more meaningful assessment of the capability of the carbon beds. The staff recognizes that such a change may require relaxation of the acceptance criteria for the laboratory test.

As discussed in the November 1, 1985, conference call between your staff and the NRC, we recommend that the technical specifications for McGuire Units 1 and 2 for the VA system be revised to reference the 1980 version of ANSI/ASME N510 in anticipation of future modifications requiring that the air flow distribution test be repeated. Such a revision now would eliminate the need for a future reaffirmation of the adequacy of a deviation from the present technical specifications.

If you have any questions regarding this letter, please contact your Project Manager, Darl Hood at (301) 492-8408.

Sincerely,

/S/

B. J. Youngblood, Director
PWR Project Directorate #4
Division of PWR Licensing-A, NRR

cc: See next page

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