

DUKE POWER COMPANY

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May 10, 1983

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Ms. E. G. Adensam, Chief
Licensing Branch No. 4

Re: McGuire Nuclear Station
Docket Nos. 50-369, 50-370

Dear Mr. Denton:

Duke Power Company has described the actions taken regarding recent problems with the DS-416 breaker undervoltage (UV) devices in a letter dated April 18, 1983 and in a meeting with the NRC Staff on April 19, 1983. The NRC reviewed the information provided and, in a telephone conference call on April 26, 1983, outlined additional actions it felt necessary to satisfactorily resolve the issue. These additional actions were discussed in conference calls on April 27, 1983 and May 10, 1983. The purpose of this letter is to provide the additional information requested by the Staff and update our April 28, 1983 and May 3, 1983 letters.

Westinghouse has been involved in the undervoltage device problems at McGuire since early in March. Duke and Westinghouse personnel have worked together in the identification and resolution of the UV devices. With one exception, the deficiencies noted in the DS-416 UV device have been discovered on the breakers at McGuire. Thus, the recommendations that have been issued by Westinghouse have been implemented at McGuire. These include:

- 1) Replacement of UV devices with new devices with all manufacturing problems corrected and with modified grooves to accommodate the new retaining rings
- 2) Installation checks on UV attachment to verify proper alignment and interface with the breaker trip shaft (the new UV devices were installed on the breakers and bench tested by operating each breaker 25 times on undervoltage with no failure).
- 3) Alerting operators to potential problems relative to reactor trip switchgear.
- 4) Re-emphasize to the operators indications available to detect failure of rods to insert into the core.

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Westinghouse also recommended in a March 31, 1983 letter that the operators initiate a manual trip following any reactor trip from the reactor protection system. Duke did not implement this recommendation since 1) existing procedures

(Reactor Trip and ATWS procedure) require a manual trip if reactor trip does not occur, and 2) a modification to the reactor trip breakers was made such that the shunt coil is energized as a result of any reactor trip signal from the reactor protection system. This automatic shunt trip of the reactor trip breaker obviates the need for a follow-up manual trip by the operator. (Note: copies of the Reactor Trip Procedure and the ATWS Procedure were sent to the NRC by letter dated May 2, 1983.)

Thus, with all the actions taken by Duke, the potential safety problems identified by Westinghouse in its Part 21 notification and its letter of March 31, 1983 to the NRC have been addressed.

The NRC Staff identified additional surveillance that should be performed to assure the operability of the reactor trip breakers. Duke evaluated the Staff's proposed testing and discussed this testing in a conference call on April 27, 1983. As a result, the following testing will be performed in addition to that required by Technical Specifications. It is proposed that these additional tests be added to the Technical Specifications only after the program has had the benefit of additional review to determine the generic applicability.

<u>Test</u>	<u>Frequency</u>
1. Independent test of UV and shunt trip on the reactor trip breakers.	Every startup if not performed within previous 7 days.
2. Test of Manual Trip from Control Room on the reactor trip breakers.	Every startup if not performed with previous 7 days.
3. Response time test of reactor trip breaker on UV signal from RPS.	Every 31 days.
4. Functional test of shunt trip of reactor trip breakers.	Every 31 days.
5. Force test on trip bar and UV device of reactor trip breakers and bypass breakers.	Every 6 months.
6. Response time test of reactor trip breakers and bypass breakers on UV signal.	Every 6 months.
7. Functional test of shunt trip on reactor trip breakers and bypass breakers.	Every 6 months.

<u>Test (cont'd)</u>	<u>Frequency (cont'd)</u>
8. Servicing, lubrication and adjustment, as appropriate, on reactor trip breakers and bypass breakers.	Every 6 months.
9. Reporting - On failure of any breaker to open on demand, either in service or during testing (on either UV or shunt), preserve evidence and notify NRC within 24 hours.	

The startup testing and monthly testing specified will be performed at this frequency for at least 6 months. This will include trending of breaker response times. After 6 months an evaluation of the benefits versus the impact of the testing will be made. A decision on the need to change the frequency would then be made and appropriate changes proposed. Accordingly, the following is a recommended license condition for inclusion in the McGuire Units 1 and 2 Facility Operating Licenses:

"The licensee shall implement the reactor trip breaker and bypass breaker testing as described in Mr. Hal B. Tucker's letter of May 10, 1983. The licensee shall not make any major modifications to this program unless prior NRC approval is received.

Major modifications are defined as:

- a. Elimination of any identified testing,
- b. Changes in the frequency of performing the identified testing, and
- c. Reduction in the scope of any of the required testing."

During the meeting with the NRC Staff on April 19, 1983 a copy of several test procedures and a maintenance procedure were provided. The Staff, in reviewing the maintenance procedures, did not see evidence of adequate QA involvement. In a conference call on April 27, 1983 it was explained that the maintenance procedure by itself was not the only document that controlled QA/QC activities. The scope of QA coverage is specified in Maintenance Management Procedures which described the work request system and QA requirements detailing specific inspection requirements for electrical equipment including circuit breakers. Copies of the following documents were sent to the NRC Staff on April 27, 1983 by express package service.

- 1) Copy of McGuire Nuclear Station Work Request Form
- 2) Procedure describing work request
 - Maintenance Management Procedure 1.0
 - Maintenance Management Procedure 3.0
- 3) QA/QC requirements for inspection of electrical equipment
- 4) Revised copy of Air Circuit Breaker Maintenance Procedure

Mr. Harold R. Denton, Director
May 10, 1983
Page 4

Duke is pursuing with Westinghouse a follow-on evaluation and reliability program for the DS-416 UV attachment. The scope and objectives of this program are being developed and will be provided to the NRC Staff by June 3, 1983.

Duke Power Company believes that the actions taken to date at McGuire in response to the DS-416 UV device problems and the commitments made for future actions provide a sufficient basis for operation of both McGuire units. All of these actions have been discussed in some detail with the NRC Staff and general agreement reached on the essential points. Accordingly, it is our intention to proceed with startup of both units consistent with the plant schedule (Unit 1 achieved criticality on May 7, 1983 and Unit 2 achieved initial criticality on May 8, 1983). However, operation will be limited to zero power physics on Unit 2 until receipt of the NRC Staff Safety Evaluation Report on the reactor trip breakers. Unit 1 will be returned to operation consistent with the agreement specified in Mr. D. G. Eisenhower's letter dated May 6, 1982.

Please advise if there are any questions regarding this matter.

Very truly yours,

H.B. Tucker / BW

Hal B. Tucker

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cc: Mr. James P. O'Reilly, Regional Administrator
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McGuire Nuclear Station