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DUKE POWER

November 28, 1994

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Subject: McGuire Nuclear Station, Units 1 and 2
Docket Nos. 50-369 and 50-370
NRC Generic Letter 92-08, Thermo-Lag 330-1 Fire
Barriers

Dear Sir:

By letter dated August 11, 1994, your office was advised that we would forward to you no later than December 1, 1994, our planned course of action for achieving compliance with Appendix R requirements involving the use of Thermo-Lag fire barrier material. These corrective measures affect the Unit 1 Train B Switchgear Room, the Unit 1 Auxiliary Building Pipe Chase, and the Unit 2 Motor Driven Auxiliary Feedwater Pump Room. Additionally, the letter stated that the target goal for these actions would be to alleviate our reliance on Thermo-Lag fire barrier material at this facility as completely and quickly as possible.

To this end, please find the following attached:

Enclosure 1 which details the scope and schedule of our planned actions.

Enclosure 2 which discusses ampacity derating for the material that will remain in place until the modifications are complete. This information was requested by Mr. Ed Connell of your staff.

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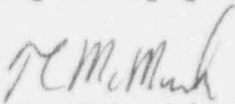
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U.S. Nuclear Regulatory Commission
November 28, 1994
page 2

Should there be any questions involving this matter,
please contact John M. Washam (704) 875-4181.

Very truly yours,


T.C. McMeekin

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U.S. Nuclear Regulatory Commission
November 28, 1994
page 3

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File: GL 92-08

Enclosure 1

PLANNED CORRECTIVE ACTIONS

Unit 1 Auxiliary Building Pipe Chase

Unit 2 Motor Driven Auxiliary Feedwater Pump Room

Planned Course of Action

Auxiliary feedwater pump suction diversity is provided by using several water sources and adequate valving for source change. The Auxiliary Feedwater (CA) pumps are normally supplied from a common header which can be aligned to the Upper Surge Tank (UST), the Condensate Storage Tank (CACST) or the Condenser Hotwell. Safety grade instrumentation is provided to detect the loss of normal pump suction sources and initiate swapover to the Nuclear Service Water System (RN) which is the assured feedwater supply. This swapover logic and instrumentation is required to ensure that the Standby Shutdown Facility (SSF) supply of water is available to mitigate the consequences of an Appendix R event.

In accordance with Standby Shutdown System (SSS) requirements, an automatic alignment for SSS source of CA is provided. Selected pressure switches will open valves CA161C and CA162C, respectively on a low suction pressure signal.

Modifications are planned which will allow the opening and subsequent deenergizing of valves CA161C and CA162C as part of the SSF startup procedure.

The modification involves two separate actions:

1. Installation of a disconnect in the SSF control panel to deenergize the valves.
2. Installation of check valves downstream of CA161C and CA162C.

The proposed modification provides a means to credit the availability of the SSF supply of water to the Turbine Driven Auxiliary Feedwater Pump in the event of an Appendix R safe shutdown fire. The modification will allow the Operator to isolate the 250 Vdc feeder voltage to valves CA161C and CA162C (to prevent spurious closure) after the valves have been opened and thereby ensure a flowpath to the Turbine Driven CA pump. The new check valves, immediately downstream of valves CA161C and CA162C, will prevent the static pressure of the UST and CACST from forcing a portion of the condensate grade water to drain to the lake when CA161C and CA162C are opened, thereby extending the volume of condensate grade water available for the Turbine Driven CA pump.

Operational Appendix R Safe Shutdown procedures will require revision to direct the Operator to manually open the RN/CA cross connect valves, and to further disable the valve control power via the new switches within the currently allotted 10 minutes.

Unit 1 Train B Switchgear Room

Planned Course of Action:

Redundant shutdown trains are required by Appendix R to be protected in the event of a fire. Train A cables pass through the Unit 1, Train B Switchgear Switchgear Room. These cables are currently separated by a three hour fire barrier constructed of Thermo-Lag 330-1 material.

The planned modification will replace the existing Train A cables, currently protected by the Thermo-Lag, with mineral insulated cables. The mineral insulated cables can withstand the temperatures produced by the postulated fire; therefore, no additional fire barrier will be required. The mineral insulated cables that will be employed in this modification will be qualified to the requirements of ASTM E119.

Schedule:

The modifications affecting the Unit 1 Auxiliary Building Pipe Chase, the Unit 2 Motor Driven Auxiliary Feedwater Room, and the Unit 1 Train B Switchgear Room will be completed during EOC 11 which is currently scheduled to begin on April 13, 1997. These modifications will permit the complete removal of the Thermo-Lag insulation at this site.

Enclosure 2

AMPACITY DERATING CONCERNS

Since the Thermo-Lag material will remain in place until the planned modifications are complete, the Staff has requested an evaluation of the concerns involving ampacity derating.

As stated in our letter dated February 11, 1994, in response to NRC Item IV.B.1, ampacity derating is an issue that applies only to cable raceways containing power cables that are continuously energized. The Thermo-Lag fire barriers at McGuire protect control cables only and do not protect any power cables that are continuously energized. The maximum loading of these control cables are 0.4 amp continuous, with an intermittent loading of 8.34 amps. This duty cycle in conjunction with the maximum loading will not result in a significant temperature rise in the cables; therefore for the fire barriers which use Thermo-Lag fire material, ampacity concerns have been satisfied.