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DUKE POWER

February 3, 1997

U. S. Nuclear Regulatory Commission
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Washington, D.C. 20555

Subject: McGuire Nuclear Station
Docket Nos. 50-369, 370
Generic Letter 95-07, "Pressure Locking and Thermal Binding
of Safety-Related Power-Operated Gate Valves"

On August 17, 1995, the NRC issued Generic Letter 95-07, "Pressure Locking and Thermal Binding of Safety-Related Power-Operated Gate Valves" to request that licensees take actions to ensure that safety-related power-operated gate valves that are susceptible to pressure locking or thermal binding are capable of performing their safety functions.

Duke Power responded to the Generic Letter per M. S. Tuckman's letter dated February 13, 1996. On July 31, 1996, McGuire provided an additional response to the NRC's Request for Additional Information dated July 1, 1996. Please find attached a supplemental response to Generic Letter 95-07 as a result of recent NRC inspection activities. McGuire commits to implement the corrective actions as outlined in the amended response.

Questions or problems should be directed to Kay Crane, McGuire Regulatory Compliance at (704) 875-4306.

Very truly yours,

H. B. Barron, Vice President
McGuire Nuclear Station

Attachment

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cc: Mr. Victor Nerses, Project Manager
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Mr. Luis Reyes
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Mr. Scott Shaeffer
Senior Resident Inspector
McGuire Nuclear Station

McGuire Nuclear Station
NRC Generic Letter 95-07
Pressure Locking and Thermal Binding
Amended Response

Previous Responses

- (1) Original Response - February 13, 1996**
- (2) Request for Additional Information
Response - July 31, 1996**

1FW0027A & 2FW0027A

Valve Application: Refueling water storage tank supply isolation

Corrective Actions: In order to avoid long term reliance on check valve leak tightness to prevent pressure locking, these valves will be modified during the 1/2EOC11 refueling outages to preclude any potential pressure locking effects.

1LD0108A, 1LD0113B, 2LD0108A & 2LD0113B

Valve Application: Diesel generator full flow lube oil filter bypass isolations

Corrective Actions: In order to avoid long term reliance on calculation methods, these valves will be modified during the 2EOC11 and 1EOC12 refueling outages to preclude any potential pressure locking effects.

1NC0031B, 1NC0033A, 1NC0035B, 2NC0031B, 2NC0033A & 2NC0035B

Valve Application: Pressurizer PORV Block Valves

Corrective Actions: 1NC0031B, 1NC0033A, 2NC0031B and 2NC0033A will be modified during or before the 1/2EOC13 refueling outages to preclude any potential thermal binding effects. 1/2NC0031B and 33A, the block valves for pressurizer PORV's 1/2NC0032B and 34A, are required to be open during Low Temperature Overpressure Protection (LTOP) conditions. The concern is a fast shutdown where the valves are closed and must be re-opened prior to attaining LTOP conditions. Tech Spec 3.4.9.3 requires that two PORV's (1/2NC0032B and 34A) with a lift setting of less than or equal to 385 psig be operable during mode 4 when the temperature of any RCS cold leg is less than or equal to 300 degrees F, mode 5, and mode 6 when the head is on the reactor vessel. No corrective actions are planned for 1/2NC0035B since these valves are not required for LTOP protection.

1ND0058A & 2ND0058A ; 1NI0136B & 2NI0136B

Valve application: Low head injection pump discharge to high & medium head injection pump isolation.

Corrective Actions: These valves will be modified during the 1/2EOC11 outages to preclude any potential pressure locking effects.

1NI0009A, 1NI0010B, 2NI0009A and 2NI0010B

Valve Application: High head injection pump discharge to cold leg isolation

Pressure Locking Evaluation: In accordance with the Duke Power Company pressure locking screening criteria, these valve applications are potentially susceptible to pressure locking since they are of the flex wedge design. In the previous response, dated 7/31/96, it was indicated that these valves are not subject to pressure locking since they would open with NV pump discharge pressure acting against one side of the wedge. Since this submittal there has been a discussion concerning the time differential between pump start and valve opening. To further clarify the scenario, for a LOCA coincident with a LOOP event, the power to the NV pumps and these valves would be restored at the same time. The most recent ESF Actuation Test results show that the slowest starting NV pump develops full pressure within 1.8 seconds. Based on past bench testing experience, these MOV's can be expected to operate at locked rotor for 4-5 seconds.

Corrective Action: For the short term, the data from future ESF tests will be reviewed to ensure the NV pump start does not extend beyond the ability of the valve to survive at locked rotor conditions. For the

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long term, these valves will be modified during the 2EOC11 and 1EOC12 outages to preclude any potential occurrence of pressure locking.

1NS0001B, 1NS0018A, 2NS0001B & 2NS0018A

Valve Application: Containment spray pump suction containment recirculation sump isolations

Corrective Actions: In order to prevent long term reliance on calculational methods, these valves will be modified during 1/2EOC11 to preclude any potential pressure locking effects.

1NS0012B, 1NS0015B, 1NS0029A, 1NS0032A, 2NS0012B, 2NS0015B, 2NS0029A & 2NS0032A

Valve application: Containment spray header isolations

Corrective Actions: The controlling procedures for quarterly running of the NS pumps will be revised by 4/30/97 to include stroking open these valves after completion of the applicable train's pump run. This will eliminate the mechanism for inducing any potential pressure locking effects.

1NS0038B, 1NS0043A, 2NS0038B & 2NS0043A

Valve Application: Low injection pump discharge to auxiliary containment spray isolations

Corrective Actions: These valves will be modified during 1/2EOC11 outages to preclude any potential pressure locking effects.

1NV0221A, 1NV0222B, 2NV0221A & 2NV0222B

Valve Application: High head injection pump suction refueling water storage tank (FWST) isolations

Corrective Actions: The 7/31/96 response to GL 95-07 indicated that either modifications or procedural changes would be made to satisfy the long term pressure locking concern for these valves. Modifications will be made during the 1/2EOC11 outages to preclude any potential pressure locking effects.