June 21, 1996

MEMORANDUM TO: William H. Bateman, Director
Project Directorate IV-2
Division of Reactor Projects III/IV

FROM: Timothy G. Colburn, Senior Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV

SUBJECT: WNP-2 RESPONSE TO GENERIC LETTER 95-07, "PRESSURE LOCKING AND THERMAL BINDING OF SAFETY-RELATED POWER-OPERATED GATE VALVES" (TAC NO. M93539)

This memorandum is to inform you that at the request of the technical reviewer for this issue, H. Rathbun, I am faxing the attached staff insights regarding industry responses to the subject generic letter to the WNP-2 licensee for its consideration in its July 15, 1996, response. This information may be discussed during a future teleconference.

Docket No. 50-397

Attachment: Staff Insights

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WNP-2 RESPONSE TO GENERIC LETTER 95-07, "PRESSURE LOCKING AND THERMAL BINDING OF SAFETY-RELATED POWER-OPERATED GATE VALVES"

1. The following valves have been determined to be susceptible to pressure locking at other BWR facilities:

RHR-V-42A/B/C, RHR (LPCI) Injection - depressurization induced pressure locking (DIPL)

RHR-V-53A/B, RHR Injection - DIPL

LPCS-5, LPCS Injection - DIPL

HPCS-V-15, HPCS Suppression Pool Suction - thermally induced pressure locking (TIPL) from heat transfer from the suppression pool

HPCS-V-4, HPCS Injection - DIPL

RCIC-V-31, RCIC Suppression Pool Suction - TIPL from heat transfer from the suppression pool

RCIC-V-13, RCIC Injection - DIPL

2. In Attachment 1 to GL 95-07, the NRC staff requested that licensees include consideration of the potential for gate valves to undergo pressure locking or thermal binding during surveillance testing. During workshops on GL 95-07 in each Region, the NRC staff stated that, if closing a safety-related power-operated gate valve for test or surveillance defeats the capability of the safety system or train, the licensee should perform one of the following within the scope of GL 95-07:

1. Verify that the valve is not susceptible to pressure locking or thermal binding while closed,
2. Follow plant technical specifications for the train/system while the valve is closed,
3. Demonstrate that the actuator has sufficient capacity to overcome these phenomena, or
4. Make appropriate hardware and/or procedural modifications to prevent pressure locking and thermal binding.

The staff stated that normally open, safety-related power-operated gate valves which are closed for test or surveillance but must return to the open position should be evaluated within the scope of GL 95-07.

3. Through review of operational experience feedback, the staff is aware of instances where licensees have completed design or procedural modifications to preclude pressure locking or thermal binding which may have had an adverse impact on plant safety due to incomplete or incorrect evaluation of the potential effects of these modifications. Licensees have been requested to describe evaluations and training for plant personnel that have been conducted for each design or procedural modification completed to address potential pressure locking or thermal binding concerns.