

August 3, 2000

Mr. Gregg R. Overbeck
Senior Vice President, Nuclear
Arizona Public Service Company
P. O. Box 52034
Phoenix, AZ 85072-0234

SUBJECT: PALO VERDE NUCLEAR GENERATING STATION UNITS 1, 2 AND 3 -
GENERIC LETTER 95-07, "PRESSURE LOCKING AND THERMAL BINDING
OF SAFETY-RELATED POWER-OPERATED GATE VALVES," - REQUEST
FOR ADDITIONAL INFORMATION (TAC NOS. M93497, M93498, AND
M93499)

Dear Mr. Overbeck:

On August 17, 1995, the U.S. Nuclear Regulatory Commission's (NRC's) staff 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.

Arizona Public Service Company (APS), in letters dated October 8, 1999, and March 31, 2000, provided information regarding the use and application of its pressure locking thrust prediction methodology. During a telephone call conducted on July 26, 2000, APS stated that it had further refined its methodology; therefore, the staff has determined that additional information is necessary to complete its safety evaluation.

The enclosed request was discussed with your staff on July 26, 2000. A mutually agreeable target date of 60 days from the date of this letter for your response was established. If circumstances result in the need to revise the target date, please call me at 301-415-3062.

Sincerely,

/RA/

Mel B. Fields, Project Manager, Section 2
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. STN 50-528, STN 50-529,
and STN 50-530

Enclosure: Request for Additional Information

cc w/encl: See next page

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Palo Verde Generating Station, Units 1, 2, and 3

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REQUEST FOR ADDITIONAL INFORMATION
RELATED TO GENERIC LETTER 95-07,
"PRESSURE LOCKING AND THERMAL BINDING
OF SAFETY-RELATED POWER-OPERATED GATE VALVES"
PALO VERDE NUCLEAR GENERATING STATION, UNITS 1, 2, AND 3

1. Arizona Public Service Company (the licensee) discussed the test results used to validate its pressure locking thrust prediction methodology in response to Generic Letter 95-07 in submittals dated October 8, 1999, and March 31, 2000. The licensee used test results from a Borg Warner and a Crane flexible wedge gate valve to support its determination that the pressure locking thrust prediction methodology accurately predicts the amount of thrust required to open a pressure-locked valve. The NRC staff reviewed the submittals and has concluded that, in lieu of the design assumptions for valve factors, it would be more appropriate to use the actual valve factors for the Borg Warner and Crane test valves to validate the methodology. Please resubmit Attachments 4 and 6 of Engineering Calculation 13-MC-ZZ-217 included in the March 31, 2000, submittal, using the valve factors based on the test results and discuss the determination of the appropriate valve factor from the test results.
2. The licensee's submittal dated October 8, 1999, discusses the recommended margin between actuator capability and the calculated thrust requirement when using the pressure locking thrust prediction methodology. This submittal states that, at postulated bonnet pressures above 200 psig, an "additional" 10% margin to account for model uncertainty is maintained between minimum actuator capability or load limit and the calculated required pressure locking load unless otherwise justified. The reference to "additional" margin above an unidentified margin needs to be clarified.
3. The submittal indicates that the additional 10% margin is needed to account for a relatively high closing thrust but the submittal does not relate the closing thrust to bonnet pressure. Discuss the basis for using the 200 psig criterion when applying the additional 10% margin.
4. Update the actual and minimum margins following the reevaluation of the test results indicated in the first question.
5. Discuss any valves where the additional 10% margin is not required.

Enclosure