December 16, 1999 File Center

Mr. William T. Cottle
President and Chief Executive Officer
STP Nuclear Operating Company
South Texas Project Electric
Generating Station
P. O. Box 289
Wadsworth, TX 77483

SUBJECT: SOUTH TEXAS PROJECT, UNITS 1 AND 2 - REQUEST FOR ADDITIONAL INFORMATION RE: GENERIC LETTER 95-07 (TAC NOS. M93521 AND M93522)

Dear Mr. Cottle:

On August 17, 1995, the Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 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.

In a letter of February 13, 1996, the former operator, Houston Lighting & Power Company (HL&P) submitted its 180-day response to GL 95-07 for South Texas Project, Units 1 and 2. The NRC staff reviewed HL&P's submittal and requested additional information by letter dated June 7, 1996. On July 11, 1996, HL&P responded to NRC's June 7, 1996, request. The NRC staff reviewed HL&P's July 11, 1996, response and requested additional information by letter dated May 25, 1999. On September 21, 1999, STP Nuclear Operating Company (STPNOC) responded to NRC's May 25, 1999, request.

The NRC staff has reviewed STPNOC's September 21, 1999, response and has determined that additional information is necessary to complete its safety evaluation. Enclosed is a request for additional information (RAI). This RAI was discussed with Mr. Phillip Walker of your staff on December 16, 1999, and a mutually agreeable response to the RAI of within 90 days from the date of this letter was established. The staff appreciates the efforts expended with respect to this matter. If circumstances result in the need to revise the target date, please call me at your earliest opportunity.

Sincerely,

ORIGINAL SIGNED BY

Thomas W. Alexion, Project Manager, Section 1
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-498 and 50-499

Enclosure: As stated

cc w/encl: See next page



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*no substantive change to RAI input

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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Thomas W. Alexion, Project Manager, Section 1
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

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Enclosure: As stated

cc w/encl: See next page

South Texas, Units 1 & 2

cc:

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Request for Additional Information

Response to Generic Letter (GL) 95-07

South Texas Project, Units 1 and 2

1. Justify use of the 23 psi/°F thermal-induced pressurization rate that was used in pressure locking calculations to determine maximum bonnet pressure for the high head safety injection hot leg isolation valves, 2N121XSI0008A/B/C and 2N122XSI0008A/B/C, the low head safety injection hot leg isolation valves, 1N161XRH0019A/B/C and 1N162XRH0019A/B/C, and the residual heat removal pump suction isolation valves 1R161XRH0060A/B/C, 1R162XRH0060A/B/C, 1R161XRH0061A/B/C, and 1R162XRH0061A/B/C. Your answer should include the basis for the Westinghouse determination that this is an acceptable thermal induced pressurization rate for use on Westinghouse valves. For example, your explanation should include any test data that was used to validate the 23 psi/°F thermal-induced pressurization rate.

2. Describe the bonnet pressure decay rate used in pressure locking calculations for valves 2N121XSI0008A/B/C and 2N122XSI0008A/B/C (6-inch, 1500-pound Westinghouse flexible wedge gate), and 1N161XRH0019A/B/C and 1N162XRH0019A/B/C (8-inch, 1500-pound Westinghouse flexible wedge gate).

   In a letter to the NRC dated May 24, 1996, Commonwealth Edison (ComEd) described bonnet pressure decay test results obtained from a 4-inch,1500-pound Westinghouse flexible wedge gate valve. The results of this testing demonstrated that one of the factors that affected bonnet pressure decay rate was torque switch setting/closing thrust. In a letter to the NRC dated September 29, 1999, Carolina Power and Light Company described bonnet pressure decay test results obtained from 3- and 10- inch, 1500-pound, Westinghouse flexible wedge gate valves. The results of the ComEd and Carolina Power and Light Company bonnet pressure decay tests differ. Discuss how your bonnet pressure decay rate compares to the ComEd and Carolina Power and Light Company bonnet pressure decay rates. If your bonnet pressure decay rate is less conservative than the bonnet pressure decay rate obtained by Carolina Power and Light Company, then explain why it is acceptable to use your bonnet pressure decay rate.

   Discuss if the torque switch setting/closing thrust values for your valves are similar to the test valves' torque switch setting/closing thrust values used to obtain your bonnet pressure decay rate. If applicable, explain how any differences between torque switch setting/closing thrust values between test valves and your valves were accounted for when determining your bonnet pressure decay rate. For example, if the test valve closing thrust value is 13,000 pounds and your valve is setup with a 20,000-pound closing thrust value, then the bonnet pressure decay rates may not be the same.

3. Discuss the risk associated with the failure of valves 2N121XSI0008A/B/C, 2N122XSI0008A/B/C, 1N161XRH0019A/B/C, and 1N162XRH0019A/B/C to open due to a common mode failure. For example, what is the change in core damage frequency and large early release frequency (if applicable) if the valves fail to open.

Enclosure

4. Describe the testing that was performed to validate the thermal binding methodology used to demonstrate that the pressurizer power-operated relief valve block valves, 1R141XRC0001A/B and 1R142XRC0001A/B, and the RCS normal and alternate charging flow isolation valves, 2R171XCV0003, 2R171XCV0006, 2R172XCV0003, and 2R172XCV0006, are capable of operating during thermal binding conditions. Explain (1) how your valves are similar to the test valves (size, material, manufacturer, model); (2) temperature conditions for your valves and the test valves; (3) the thrust predicted to open the test valves during thermal binding conditions; and (4) the measured thrust that was required to open the test valves during thermal binding conditions. Discuss the thrust requirements for your valves to operate during thermal binding conditions and actuator capability.

5. Your submittal dated September 21, 1999, states that, as long-term corrective action, the valve/actuator application for 1N161XRH0019B would be evaluated to obtain at least a 20-percent margin. When is the evaluation scheduled to be complete?