



Entergy Operations, Inc.  
River Bend Station  
5485 U.S. Highway 61  
P. O. Box 220  
St. Francisville, LA 70775  
Tel 225 336 6225  
Fax 225 635 5068

December 2, 1999

Rick J. King  
Director  
Nuclear Safety Assurance

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

Subject: River Bend Station  
Docket No. 50-458/License No. NPF-47  
Additional Information Related to Second Interval Inservice  
Testing Request for Approval of Alternative

- References: (1) RBG-45097, EOI Letter to NRC dated August 31, 1999, "Second Interval Inservice Testing Request for Approval of Alternative"  
(2) RBG-45077, EOI Letter to NRC dated July 30, 1999, "License Amendment Request 1999-15, Changes to Technical Specifications for Power Uprate of River Bend Station"

File No.: G9.5, G1.51  
RBG-45182  
RBF1-99-0314

In Reference 1, EOI requested the approval of a one-time alternative to setpoint testing the River Bend Station (RBS) main steam safety relief valves (SRVs) in accordance with the requirements of 10 CFR 50.55a. The alternative would allow a one-time extension of the test interval for 20% of the full set of SRVs from 24 months to approximately 27 months of operation.

In subsequent discussions with the NRC Project Manager for RBS, Robert Fretz, information on past setpoint testing results was provided. The information is included as Enclosure 1. Applying a trending methodology to the data, the previous test data indicate that the extension would be acceptable. That the plant technical specifications would be met could be further assured by NRC approval of a related request in Reference 2. The proposed changes for implementation of a 5% power uprate included a change to the acceptance criteria for the SRV setpoints. The power uprate request justified a revised tolerance of +/- 3% of the nominal setpoint, versus a current -2/+0% tolerance.

The analyses that support the power uprate request for changing the setpoint acceptance criteria in the RBS technical specifications also support the change prior to full implementation of power uprate, currently planned for Refueling Outage (RF) 10 (Fall 2001). However, a conservative approach for analyzing the capability of motor-operated valve actuators currently precludes application of the upper tolerance. That is, until modifications to certain actuators have been completed (currently scheduled for RF-10),

A001

PAK A000N 05000450

Additional Information Related to Second Interval Inservice  
Testing Request for Approval of Alternative  
December 2, 1999  
RBG-45182  
RBF1-99-0314  
Page 2 of 3

the upper tolerance for the SRV setpoints may not be implemented. Otherwise, the lower acceptance criteria of  $-3\%$  could be implemented presently. A plant-specific study concluded that a SRV setpoint tolerance of  $\pm 3\%$ , at current operating levels, results in plant and system performance that remains within the RBS design and licensing basis.

However, separate analyses to support motor-operated valve actuator capabilities are based on the lowest pressure setting of the safety mode for the SRVs. This is a conservative approach because, as described in detail in Reference 2, the design basis overpressurization event for RBS is a closing of all main steam isolation valves while the reactor is operating at 102% rated power and 107% rated core flow. The Boiling Water Reactor (BWR) 6 design (e.g., RBS) credits actuation of up to one-half of the installed SRVs in the relief mode with the auxiliary actuating device, with the lifting of five SRVs in the safety mode. The RBS analysis is based on actuation of four SRVs in the relief mode and five in the safety mode. We are continuing to evaluate whether the motor-operator valve actuator capabilities could be based on the lower relief mode setpoints rather than the lowest safety mode setpoint. Currently, there are no plans to change the approach. Consequently, the SRV setpoint acceptance criteria must continue to maintain no tolerance over the nominal setpoint (i.e., plus zero).

It is our understanding that the appropriate portion of the power uprate technical specification change would be separately approved to change the SRV setpoint tolerance from  $-2/+0\%$  to  $-3/+0\%$ . As a result, the inservice testing alternative request would be held for approval until after the technical specification change was approved. This sequence of approval provides additional assurance that an adequate number of valves will remain within the required setpoint tolerance for the extended period of time, based on trends of setpoint drift. EOI agrees with this more conservative approach. The MOV modifications will be completed along with the setpoint changes for the SRVs to support power uprate in RF-10. Therefore, the 3% upper tolerance should be approved as part of the power uprate license amendment.

We have determined that there are no commitments in this letter. If our understanding of the issue is not as described herein, please contact Patricia Campbell at 225-381-4615.

Sincerely,



RJK/PLC  
Enclosure

**Additional Information Related to Second Interval Inservice  
Testing Request for Approval of Alternative  
December 2, 1999  
RBG-45182  
RBF1-99-0314  
Page 3 of 3**

**Cc: (w/encl.)**

**U. S. Nuclear Regulatory Commission  
Region IV  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011**

**NRC Resident Inspector  
P. O. Box 1050  
St. Francisville, LA 70775**

**Robert J. Fretz  
U. S. Nuclear Regulatory Commission  
M/S 04-D-03  
Washington, DC 20555**

**Enclosure 1 to RBF1-99-0314**  
**MSSRV HISTORY AND PREDICTED TEST DATA**

| Valve No    | Serial No      | Date of last as-found | Name Plate SP | As-Left SP | As-Rec. SP | Pass/Fail SP    | 18m drift actual | 27m drift +0% -2% predicted | 27m drift ± 3% predicted |
|-------------|----------------|-----------------------|---------------|------------|------------|-----------------|------------------|-----------------------------|--------------------------|
| B21-RVF041L | N63800-00-0112 | 4/26/95               | 1165          | 1161.5     | 1136       | Failed (-2.5%)  | -2.2%            | -3.3% (1123.2)F             | F                        |
| B21-RVF051B | N63800-00-0123 | 4/20/95               | 1190          | 1179.25    | 1194       | Failed (+0.34%) | +1.2%            | +1.85% (1201.1)F            | P                        |
| B21-RVF051G | N63800-00-0121 | 4/24/95               | 1190          | 1180.5     | 1168       | Pass            | -1.06%           | -1.69% (1161.6)F            | P                        |
| B21-RVF051C | N63800-00-0120 | 4/19/95               | 1190          | 1178.5     | 1173       | Pass            | -0.47%           | -0.70% (1170.3)P            | P                        |
| B21-RVF041G | N63800-00-0111 | 4/25/95               | 1165          | 1157.25    | 1146       | Pass            | -1.0%            | -1.5% (1139.9)F             | P                        |
| B21-RVF041C | N63800-00-0109 | 4/22/95               | 1165          | 1155       | 1151       | Pass            | -0.35%           | -0.52% (1149)P              | P                        |
| B21-RVF041B | N63800-00-0107 | 4/27/95               | 1165          | 1151.25    | 1176       | Failed (+0.94%) | +2.1%            | +3.15% (1187.5)F            | P                        |
| B21-RVF041D | N63800-00-0106 | 4/25/95               | 1165          | 1153.75    | 1152       | Pass            | -0.15%           | -0.23% (1151.1)P            | P                        |
| B21-RVF047B | N63800-00-0100 | 4/24/95               | 1180          | 1158.9     | 1158       | Pass            | -0.08%           | -0.11% (1157.6)P            | P                        |
| B21-RVF047C | N63800-00-0098 | 4/22/95               | 1180          | 1169.13    | 1149       | Failed (-2.63%) | -1.7%            | -2.55% (1139.32)F           | F                        |
| B21-RVF047A | N63800-00-0097 | 4/26/95               | 1180          | 1167.25    | 1152       | Failed (-2.37%) | -1.31%           | -1.96% (1144.4)F            | F                        |
| B21-RVF047F | N63800-00-0095 | 4/26/95               | 1180          | 1162.5     | 1153       | Failed (-2.29%) | -0.82%           | -1.23% (1148.2)F            | P                        |
| B21-RVF047D | N63800-00-0081 | 4/25/95               | 1180          | 1165       | 1179       | Pass            | +1.2%            | +1.8% (1186)F               | P                        |
| B21-RVF051D | N63800-00-0047 | 4/26/95               | 1190          | 1177.75    | 1182       | Pass            | +0.36%           | +0.54% (1184.1)P            | P                        |
| B21-RVF041A | N63800-00-0040 | 4/23/95               | 1165          | 1149.5     | 1146       | Pass            | -0.30%           | -0.46% (1144.2)P            | P                        |
| B21-RVF041F | N63800-00-0039 | 4/23/95               | 1165          | 1159       | 1165       | Pass            | +0.52%           | +0.77% (1168)F              | P                        |
| B21-RVF041A | N63800-02-0033 | 4/21/97               | 1165          | 1145.75    | 1184       | Failed (+1.63%) | +3.23%           | +4.85% (1201.32)F           | F                        |
| B21-RVF041B | N63800-02-0034 | 5/7/97                | 1165          | 1158       | 1154       | Pass            | -0.35%           | -0.53% (1151.86)P           | P                        |
| B21-RVF041C | N63800-02-0035 | 4/28/97               | 1165          | 1156.5     | 1139       | Failed (-2.23%) | -1.51%           | -2.26% (1130.4)F            | P                        |
| B21-RVF041D | N63800-02-0036 | 5/8/97                | 1165          | 1158.75    | 1175       | Failed (+0.86%) | +1.38            | +2.1 (1183.1)F              | P                        |
| B21-RVF041F | N63800-02-0037 | 5/2/97                | 1165          | 1161.5     | 1160       | Pass            | -0.13%           | -0.20% (1159.2)P            | P                        |
| B21-RVF041G | N63800-02-0038 | 4/25/97               | 1165          | 1159.25    | 1125       | Failed (-3.43%) | -2.95%           | -4.43% (1107.89)F           | F                        |
| B21-RVF041L | N63800-02-0110 | 5/7/97                | 1165          | 1151.25    | 1144       | Pass            | -0.63%           | -0.95% (1140.3)F            | P                        |
| B21-RVF047A | N63800-02-0041 | 4/23/97               | 1180          | 1171       | 1143       | Failed (-3.13%) | -2.4%            | -3.6% (1128.84)F            | F                        |

This data was compiled from the Appendix B record of tests; however, this is not intended to replace the Appendix B record. In addition, the drift methodology is a simple linear regression, which is not a Code approved method for predicting setpoint drift. This information is provided for comparison purposes only.

**Enclosure 1 to RBF1-99-0314**  
**MSSRV HISTORY AND PREDICTED TEST DATA**

| Valve No    | Serial No      | Date of last as-found | Name Plate SP | As-Left SP | As-Rec. SP | Pass/Fail SP    | 18m drift actual | 27m drift +0% -2% predicted | 27m drift $\pm$ 3% predicted |
|-------------|----------------|-----------------------|---------------|------------|------------|-----------------|------------------|-----------------------------|------------------------------|
| B21-RVF047B | N63800-02-0042 | 4/24/97               | 1180          | 1178.25    | 1142       | Failed (-3.2%)  | -3.1%            | -4.65% (1123.46)F           | F                            |
| B21-RVF047C | N63800-02-0043 | 4/28/97               | 1180          | 1175.5     | 1152       | Failed (-2.37)  | -1.99%           | -2.99% (1140.35)F           | F                            |
| B21-RVF047D | N63800-02-0044 | 4/30/97               | 1180          | 1174.25    | 1142       | Failed (-3.22%) | -2.75%           | -4.13% (1125.75)F           | F                            |
| B21-RVF047F | N63800-02-0045 | 4/29/97               | 1180          | 1176.75    | 1132       | Failed (-4.0%)  | -3.8%            | -5.7% (1109.7)F             | F                            |
| B21-RVF051B | N63800-02-0046 | 4/26/97               | 1190          | 1175.75    | 1149       | Failed (-3.44%) | -2.27%           | -3.41% (1135.66)F           | F                            |
| B21-RVF051C | N63800-02-0115 | 4/30/97               | 1190          | 1181.5     | 1179       | Pass            | -0.21%           | -0.32% (1177.72)P           | P                            |
| B21-RVF051D | N63800-02-0117 | 4/22/97               | 1190          | 1177       | 1161       | Failed (-2.44%) | -1.36%           | -2.0(1153.5)F               | F                            |
| B21-RVF051G | N63800-02-0118 | 5/2/97                | 1190          | 1184.25    | 1167       | Pass            | -1.46%           | -2.2% (1158.2)F             | P                            |
| B21-RVF041F | N63800-02-0039 | 8/26/98               | 1165          | 1156       | 1153       | Pass            | -0.26%           | -0.39% (1151.49)P           | P                            |
| B21-RVF041A | N63800-00-0040 | 8/26/98               | 1165          | 1153.25    | 1150       | Pass            | -0.28%           | -0.42% (1148.41)P           | P                            |
| B21-RVF051D | N63800-00-0047 | 8/28/98               | 1190          | 1174.5     | 1177       | Pass            | +0.21%           | +0.32% (1170.74)P           | P                            |
| B21-RVF047D | N63800-00-0081 | 8/29/98               | 1180          | 1173       | 1153       | Failed (-2.29%) | -1.7%            | -2.55% (1143.1) F           | F                            |
| B21-RVF047F | N63800-00-0095 | 8/21/98               | 1180          | 1165.25    | 1155       | Failed (-2.1% ) | -0.88%           | -1.32% (1149.87)F           | P                            |
| B21-RVF047A | N63800-00-0097 | 8/24/98               | 1180          | 1164.5     | 1157       | Pass            | -0.64%           | -0.96% (1153.3)F            | P                            |
| B21-RVF047C | N63800-00-0098 | 8/28/98               | 1180          | 1169       | 1164       | Pass            | -0.43%           | -0.65% (1161.4)P            | P                            |
| B21-RVF047B | N63800-00-0100 | 8/25/98               | 1180          | 1173       | 1152       | Failed (-2.4% ) | -1.8%            | -2.7% (1141.33)F            | F                            |
| B21-RVF041D | N63800-00-0106 | 8/19/98               | 1165          | 1152       | 1137       | Failed (-2.4% ) | -1.3%            | -1.95% (1129.54)F           | F                            |
| B21-RVF041B | N63800-00-0107 | 8/18/98               | 1165          | 1160       | 1125       | Failed (-3.4% ) | -3.0%            | -4.5% (1107.8)F             | F                            |
| B21-RVF041C | N63800-00-0109 | 8/31/98               | 1165          | 1156.75    | 1154       | Pass            | -0.24%           | -0.36% (1152.3)P            | P                            |
| B21-RVF041G | N63800-00-0111 | 8/20/98               | 1165          | 1152.25    | 1147       | Pass            | -0.45%           | -0.67% (1144.53)P           | P                            |
| B21-RVF041L | N63800-00-0112 | 8/29/98               | 1165          | 1150.5     | 1140       | Failed (-2.1% ) | -0.91%           | -1.36% (1134.85)F           | P                            |
| B21-RVF051C | N63800-00-0120 | 8/27/98               | 1190          | 1175.5     | 1141       | Failed (-4.1% ) | -2.93%           | -4.4 (1123.78)F             | F                            |
| B21-RVF051G | N63800-00-0121 | 8/19/98               | 1190          | 1184.5     | 1183       | Pass            | -0.13%           | -0.19% (1182.24)P           | P                            |
| B21-RVF051B | N63800-00-0123 | 8/27/98               | 1190          | 1170.5     | 1160       | Failed (-2.5% ) | -0.90%           | -1.35% (1154.7)F            | P                            |

This data was compiled from the Appendix B record of tests; however, this is not intended to replace the Appendix B record. In addition, the drift methodology is a simple linear regression, which is not a Code approved method for predicting setpoint drift. This information is provided for comparison purposes only.