



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

April 6, 1992

Docket 50-458

Gulf States Utilities
ATTN: Mr. James C. Deddens
Senior Vice President (RBNG)
Post Office Box 220
St. Francisville, Louisiana 70775

Dear Mr. Deddens:

SUBJECT: RIVER BEND STATION, UNIT 1 - CLOSURE OF GENERIC LETTER 89-10,
SUPPLEMENT 3, "CONSIDERATION OF THE RESULTS OF NRC-SPONSORED TESTS
OF MOTOR-OPERATED VALVES" (TAC NO. M77796)

Generic Letter 89-10, Supplement 3, (GL Supplement) was issued to Boiling Water Reactor (BWR) licensees on October 25, 1990. The GL Supplement refocused licensee GL 89-10 activities by placing a number of containment isolation motor-operated valves (MOVs) on a high priority. For the River Bend facility, these containment isolation MOVs are located in the steam supply line for the Reactor Core Isolation Cooling (RCIC) line and the supply line for the Reactor Water Cleanup (RWCU) system. The staff requested this reprioritization based on receiving the results of NRC sponsored dynamic MOV tests performed by Idaho National Engineering Laboratory (INEL). The INEL dynamic testing of typical 6- and 10-inch flex-wedge motor-operated gate valves indicated that several of the historic design assumptions regarding MOV behavior utilized in actuator sizing were not conservative.

By letters dated December 12, 1990 (RBG-34147) and March 12, 1991 (RBG-34591), Gulf States Utilities (GSU) submitted its response to the GL Supplement for NRC staff review. In addition, GSU responded to a staff request for additional information by letter dated August 23, 1991 (RBG-35476). An NRC site inspection responding to the GL Supplement was conducted from December 9 to 13, 1991. The results of this inspection report were included in Inspection Report 91-24, which was issued on December 23, 1991.

Based on the information provided (included planned activities), the NRC staff has not identified any immediate concerns regarding the capability of the MOVs within the scope of the GL Supplement to perform their design basis function to isolate containment in the event of a pipe break downstream of the valves. While the NRC staff found the calculated required thrust to exceed the valve structural limits (listed in your letter of August 23, 1991) for the MOVs in the RCIC and RWCU systems, your letter of March 20, 1992 (RBG-36637) provided information from the valve manufacturer (Velan Valve Corporation) stating that valves within the scope of the GL Supplement will perform the design safety function for which they were intended.

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Items that may be addressed during future inspections include (1) the structural limits of each MOV in light of the increased thrust and torque requirements based on industry experience and research testing, (2) the reduction in thrust delivered by the actuator that may occur as a result of the "rate of loading" phenomenon, (3) the reduction of motor output that may occur as a result of high ambient temperature, (4) the capability of the valves to satisfy any leakage limits associated with GSU's safety analyses when closing under design basis conditions (particularly where the torque switch is set assuming low valve factors, but is bypassed for a significant portion of the valve stroke), (5) justification for the assumed stem friction coefficient, (6) justification for the assumed differential pressure under which the MOVs may be called upon to operate in light of the intent of GL 89-10, (7) the inaccuracy of MOV diagnostic equipment in measuring delivered torque or thrust, (8) the assumed minimum voltage available to the motor as compared to its licensing commitments, and (9) the closing stroke time under design basis conditions in relation to technical specifications or safety analyses (particularly for dc motors). In addition to the MOV tests, GSU will be expected to monitor the MOV tests performed by other organizations for information on the torque and thrust required to operate its valves under design basis conditions. GSU will be expected to take action to ensure MOV operability where those tests raise questions regarding the required torque or thrust estimates. With respect to the review of the NRC sponsored MOV tests by the Electric Power Research Institute (EPRI), the NRC staff agrees with the evaluation by INEL provided in EGG-SSRE-9926 (November 12, 1991), "Evaluation of EPRI Draft Report NP-9926-Review of NRC/INEL Gate Valve Test Program."

During inspections of the GL 89-10 program, the NRC staff will confirm GSU's assumptions and calculations for MOVs within the scope of the GL Supplement as well as the other MOVs within the scope of GL-89-10.

Sincerely,

Original Signed By

Douglas V. Pickett, Project Manager
 Project Directorate IV-2
 Division of Reactor Projects III/IV/V
 Office of Nuclear Reactor Regulation

cc: See next page

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Mr. James C. Deddens

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April 6, 1992

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