



GULF STATES UTILITIES COMPANY

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U.S. Nuclear Regulatory Commission
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Gentlemen:

River Bend Station - Unit 1
Docket No. 50-458

Attached are Gulf States Utilities Company's responses to the open items concerning River Bend Station's Inservice Testing Program for Pumps and Valves addressed in the NRC letter from W. A. Paulson to J. C. Deddens dated October 9, 1987.

Sincerely,

J. E. Booker
Manager-River Bend Oversight
River Bend Nuclear Group

JEB/LAE/RJR/NSF/ch

Attachment

cc: U.S. Nuclear Regulatory Commission
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ATTACHMFNT

A meeting was held at River Bend Station on December 15 & 16, 1987 with members of the NRC Staff, their consultants (EG&G Idaho, Inc.), and Gulf States Utilities (GSU) to discuss GSU's responses to the questions addressed in the NRC letter from W. A. Paulson to J. C. Deddens dated October 9, 1987, as well as other aspects of the River Bend Station Inservice Testing Program for Pumps and Valves. Several "open items" were identified in the meeting minutes for the December meeting provided under NRC letter from W. A. Paulson to J. C. Deddens dated January 6, 1988. The purpose of this attachment is to address the "open items" described in the meeting minutes. The responses are provided below and are identified with the item number in the meeting minutes.

Item #C.1 (Reactor Recirculation System) Provide a more specific technical justification for not full-stroke exercising valves VF013A, 13B, 17A and 17B quarterly.

Open Item for licensee to determine frequency for exercising of these valves.

Response: As stated in valve Relief Request No. 2, the systems were not designed for quarterly exercising of these check valves. Since the function for the valves is to prevent drywell bypass leakage, the most practical method of testing the valves closed is by performing the drywell bypass leakage test. However, due to the complexity and difficulty of this test, (involving many safety systems and requiring extensive valve tagout, lineup and time (more than two days) to prepare for and perform) the drywell bypass leakage test along with exercising these valves will be performed during refueling outages. This will be added to Relief Request No. 2.

Item #F.1 (Main Steam System) Provide a more specific technical justification for not full-stroke exercising, fail-safe testing, and stroke timing valves AOVF022A, 22B, 22C, 22D, 28A, 28B, 28C, and 28D quarterly.

Open Item for licensee to provide more technical justification for not exercising these valves during cold shutdown.

Response: These valves will be fast closure tested during cold shutdowns as per General Electric RICSIL #15 which recommends not extending fast closure testing of MSIVs to refueling cycles.

Item #F.4 (Main Steam System) Review the safety related function of valves VF024A, 24B, 24C, 24D (PID 3-1A, locations F-14, L-7, K-14 and G-7), VF029A, 29B, 29C and 29D (PID 3-1C, locations K-18, N-18, H-18 and L-18) to determine if they should be included in the IST program.

Open Item for licensee to determine safety function of these valves.

Response: The SAR Section 5.4.5.1.4, page 5.4-9, specifies that the MSIV's shall use separate energy sources as the motive force to independently close the redundant isolation valves in the individual steam lines. Instead of applying two different MSIV designs in the main steam lines, each MSIV is designed to close with two locally stored energy sources. The external springs provide one source of closure energy. The air accumulator provides the other source of closure energy.

The air supply to the MSIV is classified as interruptible. Hence, the air supply to the accumulator cannot be counted on to provide the pressurized air for MSIV closure. Even if the air supply has been classified as non-interruptible, the size and the length of the air supply line would restrict the amount of air that can be supplied to the MSIV actuator, and is not likely to be adequate for a MSIV fast closure. The SAR further disallows the dependency on continued electrical power to furnish motive force for MSIV closure for at least one MSIV in a main steam line. Hence the air supply system cannot be considered as an energy source for MSIV closure.

The check valve upstream of the MSIV accumulator must meet the leak tightness requirement specified in GE nuclear Boiler Design Specification 22A4622, revision 7, paragraph 4.5.3.4 and 4.5.3.5 to assure an adequate pressurized air supply in the accumulator for MSIV closure.

Therefore, these check valves will be added to the IST P/V Plan and exercised during cold shutdowns.

Item #H.6 (Service Water System) Provide a more specific technical justification for not full-stroke exercising valves V650 and V651 quarterly.

Open Item for licensee to determine safety function of these valves.

Response: The safety function of service water check valves 1SWP*V650 & V651 are to prevent the flow of standby service water into the drywell unit coolers which are not safety related. Should failure of the non-safety related unit coolers occur, loss of the standby service water system may also occur were the check valves not present. In addition, they establish return of the standby service water.

Item #J.2 (Standby Liquid Control System) Provide a more specific technical justification for not full-stroke exercising valves MOVF001A, MOVF001B, VF033A and VF033B quarterly.

Open Item for licensee to determine if valves MOVF001A & B can be exercised quarterly.

Response: These valves should not be stroked quarterly because upon stroking either of the valves (stroking takes approx. 30 sec.), the common suction lines must be flushed due to the aggressive nature of the sodium pentaborate solution. This flushing would require opening of the manual condensate makeup valve during the flushing procedure. Should initiation of the standby liquid control be required, the available solution would be diluted by the addition of the condensate makeup while the manual isolation valve is open. The concentration of the solution after being diluted may not meet Technical Specification limits for its safety function.

This should not be allowed to occur at a time when an emergency would be so critical as to require standby liquid control injection. Habitability of containment may not permit the operator action required to close the manual condensate makeup valve. Also, the volume may be depleted by the time this action is taken.

Item #N.1 (Reactor Core Isolation Cooling System) What alternate methods have been investigated to verify closure of valves VF011 and VF061 quarterly?

Open Item for licensee to determine method for verifying closure of valve VF061 quarterly.

Response: Closure is verified during cold shutdown because to test VF061 requires shutdown of the line-fill pump. Per Technical Specification definition of operability, shutdown of the line-fill pump would require the main RCIC pump to be made inoperable. After the line-fill pump is restarted, the entire system must be vented and filled in order to remove air which could cause pump cavitation or water hammer damage to the injection line. The system could be out of service for several hours while this process is being completed. Plant safety would be reduced while the system is out of service in order to test this valve during plant operation.

Item #N.2 (Reactor Core Isolation Cooling System) Describe the flow path utilized to full-stroke exercise valve VF030 open quarterly. Does this valve perform a safety function in the closed position?

Open Item for licensee to determine method for full-stroke exercising open and closed valve VF030.

Response: Due to increased cleanup involved with taking suction from the suppression pool and routing it to the condensate storage tank while running the RCIC main pump, Relief Request #24 was revised to allow check valve VF030 to be disassembled and exercised manually during refueling outages.

Item #N.4 (Reactor Core Isolation Cooling System) Provide a more detailed technical justification for not full-stroke exercising valve VF013 quarterly.

Open Item for licensee to investigate interlocks associated with valve VF013, i.e. opening this valve during power operation may trip the main turbine.

Response: The F013 valve is interlocked with the RCIC turbine trip and throttle valve, C002 and the RCIC steam supply shutoff valve, F045. In order for F013 to be stroked open, these two steam valves must be open, allowing sufficient steam under pressure to start the RCIC pump injecting cold water into the RPV through the open F013 valve. The resulting thermal shock to the RPV as well as the resulting moisture carry over to the main turbine would be undesirable and could cause unnecessary damage to the main turbine. There is no interlocking trip to the main turbine connecting to the F013 valve; however, moisture carry over and the resulting vibration will trip the main turbine. Relief Request #53 will be augmented with additional technical justification as stated above.

Item #Q.1 (Containment Atmosphere and Leakage Monitoring System) What is the correct direction of flow through valve V41? Should both the open and closed positions be verified during testing?

Open Item for licensee to determine open verification frequency.

Response: This valve is verified open each month by Chemistry and quarterly by Instrumentation and Control technicians as they operate the sample panel and recalibrate the instruments per STP-254-4203 (A) & 4204 (B).