GULF STATES UTILITIES COMPANY

RIVER BEND STATION | POST OFFICE BOX 220 | ST. FRANCISVILLE, LOUISIANA 70775

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U.S. Nuclear Regulatory Commission
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Gentlemen:

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

Enclosed is supplement 2 to Gulf States Utilities Company's Special Report concerning an inoperative loose-part detection system channel. The original report was submitted on January 10, 1991 followed by supplement 1 on September 30, 1991 pursuant to River Bend Station Technical Specification 3.3.7.9 and 6.9.2. This supplement provides the results of further investigation and corrective actions to restore the loose-part detection system channel to operable status.

Sincerely,

W.H. Odell
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SPECIAL REPORT

REPORTED CONDITION

On 12/01/90, during normal surveillance testing, the light providing failure indication of the loose parts monitoring (LPM) channel 8 detector module was illuminated, indicating channel low background noise. This supplement provides the results of further investigation and corrective actions to restore the loose-part detection system channel to operable status.

INVESTIGATION

Troubleshooting by plant staff personnel located the failure inside the drywell structure which is inaccessible during power operations. This same channel was reported failed on 07/12/90 and was repaired during refueling outage 3 (RF-3). Previous troubleshooting had determined that the problem was either in the accelerometer or in the cable leading to the accelerometer. The accelerometer was replaced on 11/17/90 and channel 8 was returned to operable status. Channel 8 functioned properly during startup from RF-3 but failed again on 12/01/90. Based on this second failure, it was determined that a fault within the cable was causing the channel to be inoperative.

After further investigation it was discovered that the softline cable for LPM-NBE4B (channel 8) had degraded due to high temperature in the drywell overhead. Due to this degradation channel 8 was inoperative. During refueling outage 4, a modification (MR-91-0085) replaced the softline cable on channel 8 with cable designed to withstand higher temperatures. In addition, the cables on channels 5, 6, and 7 were replaced per MR-91-0085. Surveillance procedures have been performed on all 8 channels and the LPM system has been returned to service.

SAFETY ASSESSMENT

The low background problem caused the channel 8 failure indication light to illuminate, indicating a malfunctioning channel. There has been no indication of a loose part in the reactor vessel and thus the health and safety of the public and plant safety were not affected by this condition. In addition, the problem did not affect the capability of the remaining channels to detect loose parts in the reactor vessel since a common annunciator is initiated when any of the LPM channels detects an impact signal.

Note that both channels 7 and 8 are designed to detect loose parts in the upper portion of the reactor vessel. Thus, even with channel 8 inoperable, channel 7 was available in the event that a loose part were to appear in the upper portion of the vessel.