

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) RIVER BEND STATION	DOCKET NUMBER (2) 0 5 0 0 0 0 4 5 8	PAGE (3) 1 OF 0 3
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TITLE (4)
Reactor Scram On Loss Of Condensate Flow

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)			
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES			DOCKET NUMBER (5)
0 1	0 1	8 6	8 6	0 0 1	0 1	0 6	2 4	8 8				0 5 0 0 0 0
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OPERATING MODE (9) 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)										
POWER LEVEL (10) 0 1 9	20 402(b)			20 406(c)			<input checked="" type="checkbox"/> 50 73(a)(2)(iv)			73 71(b)	
	20 406(a)(1)(i)			50 36(e)(1)			<input type="checkbox"/> 50 73(a)(2)(v)			73 71(c)	
	20 406(a)(1)(ii)			50 36(e)(2)			<input type="checkbox"/> 50 73(a)(2)(vi)			OTHER (Specify in Abstract below and in Text, NRC Form 306A)	
	20 406(a)(1)(iii)			50 73(a)(2)(i)			<input type="checkbox"/> 50 73(a)(2)(vii)(A)				
	20 406(a)(1)(iv)			50 73(a)(2)(ii)			<input type="checkbox"/> 50 73(a)(2)(viii)(B)				
	20 406(a)(1)(v)			50 73(a)(2)(iii)			<input type="checkbox"/> 50 73(a)(2)(ix)				

LICENSEE CONTACT FOR THIS LER (12)		TELEPHONE NUMBER	
NAME L. A. England - Director-Nuclear Licensing		AREA CODE 5 1 0 1 4	NUMBER 3 1 8 1 1 - 1 4 1 1 4 5

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO						

ABSTRACT (Limit to 1400 spaces, i.e. approximately fifteen single space typewritten lines) (16)

On 01/01/86 at 0354 the unit scrambled from 19 percent power on low reactor water level (level 3). The low level scram was a result of isolations on both low pressure feedwater heater strings coincident with a failure of the low pressure feedwater heater bypass valve to open. At 0356 Reactor Core Isolation Cooling was started and used to restore level prior to reaching the initiation level for High Pressure Core Spray. An investigation into the event was conducted. It was determined that the probable cause for the isolations was flashing in the level transmitter pots causing high level spikes. It is believed that the failure of the bypass valve to open was a result of thermal binding causing the motor operator circuit breaker to trip on overload. There were no safety consequences or implications to the public as a result of this event.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT (if more space is required, use additional NRC Form 306A's) (17)

On 01/01/86 at 0354 the unit scrambled from 19 percent thermal power on low level (level 3) due to a loss of all feedwater flow. Apparently a spurious high-high level in the 'A' 5th point low pressure feedwater heater (*HX*) tripped causing condensate flow to the 'A' string to isolate. The 'B' low pressure heater string had previously isolated and gone undetected. It is believed to have been caused by a similar spurious signal which may have caused the 'A' heater string to isolate. The low pressure heater string bypass valve (*V*) failed to automatically open on either 'A' or 'B' heater string isolation. Its breaker (*BXR*) was found tripped. This resulted in a complete isolation of condensate flow to the feed pumps (*P*) and a loss of feedwater flow to the vessel. The feedwater pumps are designed to trip on low suction pressure; however, feedwater pump 'A' failed to trip and ran for approximately five minutes before condensate flow was restored. At 0356 the Reactor Core Isolation Cooling (RCIC) (*BN*) system was started and used to restore level prior to reaching the initiation level for High Pressure Core Spray (HPCS (*BG*)).

Upon thorough investigation of all associated feedwater heater train instrumentation and logic, with no apparent problems discovered, it was determined the probable cause to be flashing in the level transmitter (*LT*) pots causing high level spikes. Failure of the low pressure heater string bypass valve to open was also investigated. It is possible that during system heat up the bypass valve may have thermally bound and caused the motor (*MO*) overload.

Corrective action has been taken to ensure condensate pots for level transmitters are filled. These level transmitters have been instrumented with a strip recorder (*LR*) to monitor for similar occurrences. The low pressure heater bypass valve motor overload has been reset from its lower current setting to its upper setpoint. Additionally, General Operating Procedure (GOP)-0001 "Plant Startup to Low Power Alarm Point" has been revised to require the bypass valve to be left in the open position until approximately 15 percent power to prevent valve binding during system heatup. Finally, human factors design changes have been initiated via Modification Requests (MRs) 86-0015, 0016, and 0017 to highlight heater level alarms and trip indicators for the heater bypass valve.

MR 86-0015, highlighting the heater level alarms, was completed on 8/20/86. System performance has been satisfactory since completion of the MR. MRs 86-0016, installation of indicating lights for out of service feedwater system, and 96-0017, a trip indicator for heater bypass valves, has been re-evaluated considering the additional human factors design change. Based on the decreased probability for human error after implementation of MR 86-0015 and satisfactory system performance since the reported event, these additional modifications have been determined to be unnecessary and will not be implemented at this time.

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NOTE: (If more space is required, use additional NRC Form 366A's) (17)

There were no safety consequences or implications to the public because the unit was placed in a safe shutdown condition, and water level was quickly restored via the RCIC system. Furthermore, redundant Emergency Core Cooling Systems (ECCS) were available at all times as an additional source of coolant if necessary.

NOTE: Energy Industry Identification System Codes are identified in the test as (*XX*).

GULF STATES UTILITIES COMPANY



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AREA CODE 504 835-6094 346-8651

June 24, 1988
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U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Gentlemen:

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

Please find enclosed Licensee Event Report No. 86-001 Revision 1 for River Bend Station - Unit 1. This report is being submitted to provide updated information on corrective action.

Sincerely,

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

For RRS
JEB/TFP/PDG/RRS/ch

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