

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) RIVER BEND STATION, UNIT 1										DOCKET NUMBER (2) 0500004581 OF 03																																																																
TITLE (4) Reactor Scram Due to Turbine Load Imbalance																																																																										
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 NAME						DOCKET NUMBER (8)																																									
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OPERATING MODE (9) 1						THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 43.41 (Check one or more of the following) (11)																																																																				
POWER LEVEL (10) 01211						20.000000						20.000000						X						00.75000000						75.7100																																												
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LICENSEE CONTACT FOR THIS LER (12) G. Alan Bysfield, Senior Systems Engineer																				TELEPHONE NUMBER 504 635-6094																																																						
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																																																																										
CAUSE		SYSTEM		COMPONENT		MANUFAC. TOLER		REPORTABLE TO NRC				CAUSE		SYSTEM		COMPONENT		MANUFAC. TOLER		REPORTABLE TO NRC																																																						
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SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)										MONTH DAY YEAR																																																						
YES (If yes, complete EXPECTED SUBMISSION DATE)										X NO																																																																

ABSTRACT (Limit to 1400 words) (A. Approximately 11000 single-spaced typewritten lines) (16)

At 1015 on 12/31/85 with the unit in operational condition 1 (power operation) a turbine generator trip occurred on a false turbine generator power load imbalance. The reactor scrambled seven seconds later on high pressure. The power load imbalance was caused by a combination of factors. The first was a pressure transducer which had failed prior to the scram and secondly, a lightning strike on a 500 kV transmission line. The failed pressure transducer was subsequently replaced via a maintenance work request. It has been determined that there were no safety consequences or implications as a result of this event.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 1501-004
EXP. RES. 12-85

FACILITY NAME (1)

DOCKET NUMBER (2)

LER NUMBER (3)

PAGE (3)

RIVER BEND STATION

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8 5 - 0 6 3 - 0 0 0 2 OF 0 3

TEXT IF MORE SPACE IS REQUIRED, USE ADDITIONAL NRC Forms 308A (1/77)

At 1015 on 12/31/85 with the unit in operational condition 1 (power operation), the four turbine control valves and four turbine intercept valves (TIVs) were given a fast closure signal. The increased pressure caused the turbine bypass valves to open. Fifty-one seconds later the four turbine main stop valves tripped which caused a turbine generator trip. Approximately 7 seconds later, the reactor scrammed on high pressure.

Investigation of the incident revealed that the actuation of the turbine control/intercept valve fast closure was due to a false turbine generator power load imbalance. This sensed power load imbalance was caused by a combination of two separate occurrences. A pressure transducer sensing impulse pressure to the low pressure turbine stage had failed prior to the scram and was documented on a Maintenance Work Request (MWR) to be reworked. At the time of this event the pressure transducer was failed high. Also, a transient was introduced on the Gulf States Utilities (GSU) grid by a lightning strike on a 500 kV transmission line. The power load imbalance relay requires a power differential between the steam input to the low pressure turbine and the electrical output of the generator of 40 percent differential and a sufficient rate of change of current before it will trip. The failed pressure transducer provided the 40 percent differential and the lightning strike provided a sufficient change in current.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED FOR NO. 15040 14

EXP. RES. 5-21-85

FACILITY NAME (1) RIVER BEND STATION	DOCKET NUMBER (2) 0 5 0 0 0 4 5 8	LER NUMBER (3)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		8 5	0 6 3	0 0	0 3	OF 0 3

TEXT: IF MORE SPACE IS REQUIRED, USE ADDITIONAL NRC Form 3084's (17)

Once the turbine control/intercept valves were given the fast closure signal they tripped and immediately tried to reset. With all eight valves trying to reset simultaneously there was a sufficient loss of hydraulic pressure in the Emergency Trip System to cause the turbine bypass valve to open and the four turbine stop valves to shut. This caused a turbine generator trip and reactor scram on high pressure.

In an effort to prevent recurrence the pressure transducer has been replaced via MWR 6637. A retrofit of the reset logic circuitry for the turbine intercept valve fast closure is being investigated. This retrofit would sequence the reopening of the TIVs one at a time to minimize the hydraulic pressure reduction. Modification Request 86-0129 has been initiated to request this design change.

There were no safety consequences or implications as a result of this event. The Engineered Safety Features of the plant performed as designed in response to the failed equipment and situation and affected a safe shutdown of the plant.



GULF STATES UTILITIES COMPANY

RIVER BEND STATION POST OFFICE BOX 220 ST. FRANCISVILLE, LOUISIANA 70775
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January 30, 1986
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File Nos. G9.5, G9.25.1.3

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

Dear Sir:

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

Please find enclosed Licensee Event Report No. 50-563 for River Bend Station - Unit 1. This report is submitted pursuant to 10CFR50.73.

Sincerely,

J. E. Booker
Manager-Engineering,
Nuclear Fuels & Licensing
River Bend Nuclear Group

JEB/TFP/DRG/BEH/amg

cc: U. S. Nuclear Regulatory Commission
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