

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1): RIVER BEND STATION	DOCKET NUMBER (2): 0 5 0 0 0 4 5 8	PAGE (3): 1 OF 0 3
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TITLE (4)
Reactor Scram On Turbine Trip Due To High Vibration Signal

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(S)			
0	5	19	8	6	03	9	0	1	05	27	88		0 5 0 0 0
													0 5 0 0 0

OPERATING MODE (9): 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 43.71 (Check one or more of the following) (11):									
POWER LEVEL (10): 0 7 13	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)						
	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)						
	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)						
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)							
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)							
<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 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 0 4 3 8 1 - 4 1 4 5

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)										
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	
C	I	V	V	T						
			G	0	8	0	N			

SUPPLEMENTAL REPORT EXPECTED (14)	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input checked="" 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)

At 0654 on 5/19/86 an inadvertent fire protection deluge system actuation occurred. This actuation deluged main turbine bearings 1, 2 and 3. Main turbine operation, including vibration, was monitored closely with no abnormalities noted. The actuation was secured at approximately 0709. At 1420 that same day, with the unit at 73 percent power, the main turbine tripped on a high bearing vibration signal causing a closure of the turbine stop valves and a subsequent reactor scram. Investigation revealed water accumulation in the #3 bearing vibration probe cable connector which caused a false trip signal. Work per a Modification Request has been completed which changes the turbine bearing fire protection system from a deluge to a pre-action type. This change will prevent the fire suppression water system from spraying water unless an actual fire is present.

All systems responded normally to the turbine trip and reactor scram. There was no actual high vibration otherwise indicated. There was no adverse affect on the safe operation of the plant or to the health and safety of the public since the reactor scram placed the unit in a more conservative condition.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) RIVER BEND STATION	DOCKET NUMBER (2) 0 5 0 0 0 4 5 8 8 6	LER NUMBER (5)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		0	3	9	0	1	0 2 OF 0 3

TEXT (if more space is required, use additional NRC Form 368A's) (17)

REPORTED CONDITION

At 0654 on 5/19/86 the main turbine bearing fire protection deluge system (*KP*) inadvertently actuated. This actuation deluged main turbine (*TA*) bearings 1, 2 and 3. Main turbine operation, including vibration, was monitored closely with no abnormalities noted. The actuation was secured at approximately 0709. Investigation of the area and monitoring of the turbine operation revealed no unusual affects of the deluge. Normal operation continued until 1420 with the unit at 73 percent power when the main turbine tripped on #3 bearing high vibration resulting in a reactor scram. All systems responded normally to the turbine trip, i.e., the control (*FCV*) and stop (*SHV*) valves closed, the turbine by-pass valve (*XCV*) opened, and the reactor scrambled as designed. The reactor water level was properly maintained by the feedwater (*SJ*) flow.

INVESTIGATION

The cause of the deluge is indeterminate. The system is manually actuated only. Once actuated, the deluge continues until manually isolated. The switch (*HS*) used to initiate the system was found in the normal position, although it may have been positioned to actuate and then repositioned to normal. From the results of the investigation, no conclusion could be made to determine if anyone was in the area to actuate the deluge system initiation switch. After isolating the deluge, inspections did not reveal any unusual or abnormal affects. After the turbine trip, the turbine bearing #3 vibration probe (*VE*) cable connection cover was removed and significant water accumulation was found. This caused a grounding of the connector, leading to a false high vibration signal. Evaluation of all parameters, including other vibration signals, and subsequent normal operation showed that no actual high vibration condition existed.

CORRECTIVE ACTION

The vibration probe cable connection covers were removed and any water accumulation present was dried. The vibration probe (General Electric Model 3S7700VB100) was functionally tested and found to respond properly. Modification Request (MR) 86-0167 was generated on 1/17/86 (ref. LER 86-005), to provide tamper proof switch covers on the deluge activation switches, in response to an inadvertent water curtain actuation. This work has been completed.

Initially, MR 86-0827 was initiated to install card readers on both doors to the fire protection room in the turbine building to provide access control and accountability of persons entering the room. This room contains fire protection isolation valves which can be manually opened to initiate the deluge system. However, MR 86-0827 has been

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FACILITY NAME (1) RIVER BEND STATION	DOCKET NUMBER (2) 0 5 0 0 0 4 5 8 8 6 - 0 3 9 - 0 1 0 3 OF 0 3	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		

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

cancelled in favor of an alternate solution which was to change the fire suppression system actuation to a pre-action type.

Subsequently, MR 86-1584 was implemented as a solution to the problem. This MR changed the turbine bearing fire protection system from a deluge to a pre-action type. This change installed closed sprinkler heads which will prevent the fire suppression water system from spraying water unless an actual fire is present. This work has been completed. These corrective actions will provide the necessary protection against inadvertent or unnecessary water spray on the main turbine bearings.

In the interim, the deluge system had its manual isolation valve closed, under administrative control, to preclude inadvertent actuation.

SAFETY ASSESSMENT

All systems responded normally to the turbine trip and reactor scram. There was no adverse affect on the safe operation of the plant or to the health and safety of the public since the reactor scram placed the unit in a more conservative condition.

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



GULF STATES UTILITIES COMPANY

RIVER BEND STATION POST OFFICE BOX 220 ST. FRANCISVILLE, LOUISIANA 70775
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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. 86-039 Revision 1 for River Bend Station - Unit 1. This report is being submitted to provide additional information.

Sincerely,

J. E. Booker
JE

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

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PDG
RRS
JEB/TFP/PDG/RRS/ch

cc: U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011

NRC Resident Inspector
P.O. Box 1051
St. Francisville, LA 70775

INPO Records Center
1100 Circle 75 Parkway
Atlanta, GA 30339-3064

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