GULF STATES UTILITIES COMPANY

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

AREA CODE 504 635-6094 346-8651

September 4, 1992

RBG-37,455
File Nos. G9.5, G9.25.1.3

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. 92-015 for River Bend Station - Unit 1. This report is submitted pursuant 10CFR50.73.

Sincerely,

W. H. Odell
Manager - Oversight
River Bend Nuclear Group

LAE/PDG/FRC/JHM/RH/pj

140142

IE22

cc: U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 400
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

Mr. C. R. Oberg
Public Utility Commission of Texas
7800 Shoal Creek Blvd., Suite 400 North
Austin, TX 78757

Louisiana Department of Environmental Quality
Radiation Protection Division
P.O. Box 82135
Baton Rouge, LA 70884-2135
ATTN: Administrator

NRC FORM 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92
ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
RIVER BEND STATION	0 5 0 0 0 4 5 8	1 OF 0 1 3

TITLE (4): REACTOR WATER CLEANUP SYSTEM ISOLATION DUE TO THE FAILURE OF A TEMPERATURE SWITCH

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 0 0 0
0 8	0 8	9 2	9 2	—	0 1 5	— 0 0	0 9	0 4	9 2		0 5 0 0 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

OPERATING MODE (9)					
5	20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)	
POWER LEVEL (10)	20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)	
1 0	20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)	
	20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)		
	20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)		
	20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
L. A. England, Director - Nuclear Licensing	5 0 4 3 8 1 1 - 1 4 1 4 5

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
X	C E	T S	R 2 8 1	Y							

SUPPLEMENTAL REPORT EXPECTED (14)

		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

At 1547 on August 8, 1992 with the unit shutdown (Operational Condition 5), a plant operator returned the reactor water clean-up (RWCU) bypass switches to the normal configuration following maintenance and, due to a failure of the RWCU backwash receiver high ambient temperature monitor, a RWCU system isolation occurred. Apparently, the RWCU backwash receiver high ambient temperature moniter, 1E31*TSN627B, failed during the period that the RWCU bypass switch was in BYPASS. The switch failure resulted in a common alarm in the main control room but did not give an alarm indication at the switch unit. The RWCU pumps were manually secured by plant operators.

The root cause of this event is a combination of personnel error and equipment failure. The personnel error is due to inadequate investigation and resultant incorrect assumption of the cause for the "RWCU BW RCVR HI AMBIENT OR DIFF TEMP" alarm. Although the specific failure mode of the temperature switch is not known at this time, the malfunctioning unit is being returned to the equipment vendor for an in depth analysis of the failure mechanism. The malfunctioning switch was replaced with a new unit and satisfactorily tested in accordance with STP-207-5233. Initiation of RWCU system isolation was based on an invalid isolation signal and had no adverse impact on plant safety. As a result, there was no impact on the health and safety of the public.

APPROVED OMB NO. 3150-0104
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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
RIVER BEND STATION	0 5 0 0 0 4 5 3	9 2	0 1 5	0 0	0 2 OF 0 3

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

REPORTED CONDITION

At 1547 on August 8, 1992 with the unit shutdown (Operational Condition 5), a plant operator returned the reactor water clean-up (*CE*) (RWCU) bypass switches to the normal configuration following maintenance and, due to a failure of the RWCU backwash receiver high ambient temperature monitor, 1E31*TSN627B, a RWCU system isolation occurred. The isolation of the RWCU system constitutes an engineered safety feature (ESF) actuation. Therefore, this event is reportable under 10CFR50.73 (a)(2)(iv).

INVESTIGATION

Following plant maintenance, the RWCU bypass switches were being returned to the normal configuration per SOP-0090. Apparently, the RWCU backwash receiver high ambient temperature monitor 1E31*TSN627B failed during the period that the RWCU bypass switch was in BYPASS. The switch failure resulted in a common alarm, "RWCU BW RCVR HI AMBIENT OR DIFF TEMP", at 1H13*P680 in the main control room but did not give an alarm indication at the switch unit, also located in the main control room. The plant operators thought that the alarm was due to a failed annunciator card since the switch unit was not in the alarm state. All isolation functions occurred as expected with the exception that the RWCU pumps did not trip due to jumpers being installed for the low flow trip function because of maintenance (MWOR-059199). The RWCU pumps were manually secured by plant operators.

The cause of the isolation signal was the failure of the monitor's temperature switch No. 1E31*TSN627B, Model 86 PEGF-EG. This switch was manufactured by The Riley Company. While troubleshooting, Maintenance personnel noted that the internal hermetically sealed output relay appeared to be stick but the specific cause of this failure is not known. For a description of earlier events involving Riley temperature switches, see LERs 85-009, 85-029, 85-031, 85-035, 85-037, 86-050, 86-051, 88-024, 90-019 and 90-046. The malfunctioning temperature switch was replaced and tested satisfactorily in accordance with STP-207-5233.

ROOT CAUSE

The root cause of this event is a combination of personnel error and equipment failure. The personnel error is due to inadequate investigation and resultant incorrect assumption of the cause for the "RWCU BW RCVR HI AMBIENT OR DIFF TEMP" alarm. Although the specific failure mode of the temperature switch is not known at this time, the malfunctioning unit is being returned to the equipment vendor for an in depth analysis of the failure mechanism. A review of NPRDS for similar failures (invalid alarm signals, not caused by use of the read/set switch) indicates 4 occurrences for Riley temperature switches system wide. None of the failures described are the same as the failure observed in this case. This failure rate is not considered to be excessive and, based on failure information currently available, no generic corrective action is being pursued at this time.

CORRECTIVE ACTION

The malfunctioning switch was replaced with a new unit and satisfactorily tested in accordance with STP-207-5233. The malfunctioning switch was returned to the vendor for failure analysis. No long term corrective action is necessary at this time as a result of this equipment failure.

A night order was implemented to remind control room operators of the need to use extreme caution when restoring a system to service following an extended shutdown for maintenance and the need to use all available sources to determine the cause of an alarm.

SAFETY ASSESSMENT

The plant was shutdown for refueling and the status of the RWCU was operating normally. Initiation of RWCU system isolation was based on an invalid isolation signal and had no adverse impact on plant safety. As a result, there was no impact on the health and safety of the public.

(Energy Industry Identification System Codes are identified as *XX*).