GULF STATES UTILITIES COMPANY

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

AREA CODE 504 635-6094 346-8651

March 25, 1992
RBG- 36,663
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. 92-004 for River Bend Station - Unit 1. This report is submitted pursuant 10CFR50.73.

Sincerely,

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

JRE/PDG/JPS/DCH/JRL/kvm

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 Parkway
Atlanta, GA 30339-3064

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

NRC FORM 366
(6-89)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

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

FACILITY NAME (1)
RIVER BEND STATION

DOCKET NUMBER (2): 0 5 0 0 0 4 5 8

PAGE (3): 1 OF 0 4

TITLE (4): INCREASED SURVEILLANCES (PER TECHNICAL SPECIFICATION 4.0.5) MISSED FOR STANDBY SERVICE WATER PUMPS DUE TO PROCEDURAL DEFICIENCY

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 2	2 4	9 2	9 2	- 0 0 4	- 0 0	0 3	2 5	9 2		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9): 1

POWER LEVEL (10): 1 0 0

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

20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
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)	X 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: L.A. England, Director - Nuclear Licensing

TELEPHONE NUMBER: AREA CODE 5 0 4 — 3 8 1 - 4 2 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	

SUPPLEMENTAL REPORT EXPECTED (14)

[ ] YES (If yes, complete EXPECTED SUBMISSION DATE) [X] NO

EXPECTED SUBMISSION DATE (15): MONTH | DAY | YEAR

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

On 2/24/92, a review of surveillance testing pump performance plots for the service water system equipment revealed five past occurrences of missed surveillances. All five of these occurrences involved a failure to increase the testing frequency when monitored equipment entered the "alert" or "conditionally acceptable" performance range, as called for in ASME XI IWP-3230(a), and reflected in Technical Specification 4.0.5.a. It has been determined, through personnel interviews, that the common cause for all of the missed surveillances was procedural deficiency and vagueness, leading to human error through misinterpretation. GSU has determined that these conditions did not render any of the affected components incapable of performing its safety function.

As corrective action, the document used to indicate the results of surveillance tests has been revised to clearly indicate when components are in alert, and list them by mark number.

REPORTED CONDITION

On 2/24/92, a review of surveillance testing performance plots for service water system equipment revealed five past occurrences of missed surveillances. All five of these occurrences involved a failure to increase the testing frequencies as required by Technical Specification 4.0.5.a and ASME XI IWP-3230(a). ASME XI IWP-3230(a) states that when, in the performance of a surveillance, deviations fall within the alert range for a pump, the normal testing frequency shall be doubled. In the five cases reported here, the frequency was not changed and the surveillance was next performed at the normal (quarterly) frequency. To document the noncompliance with the surveillance requirement, this report is submitted pursuant to 10CFR50.73(a)(2)(i)(B) as operation prohibited by the Technical Specifications.

INVESTIGATION

The following surveillance tests and equipment were affected by the condition described above:

DATE OF "ALERT" SURVEILLANCE	SURVEILLANCE PROCEDURE NO.	EQUIPMENT MARK NO. AND DESCRIPTION
04-07-88	STP-256-3303	1SWP*P2A Division 1 Standby Service Water Pump A.
04-15-88	STP-256-3305	1SWP*P3C Division 1 Control Building Chiller Service Water Circulating Pump.
11-15-90	STP-256-3303	1SWP*P2A Division 1 Standby Service Water Pump A.
02-08-91	STP-256-3303	1SWP*P2C Division 1 Standby Service Water Pump C.
05-21-91	STP-256-6304	1SWP*P2B Division 2 Standby Service Water Pump B.

On 2-24-92, an investigation was performed to determine if subsequent performances of each of the surveillances could be identified which assured equipment operability on the date of discovery. It was shown that each of the components listed above was verifiably operable on the date of discovery, 2-24-92.

ROOT CAUSE

It has been determined, through personnel interviews, that the common cause for all five of the missed surveillances was procedural deficiency and vagueness, leading to human error through misinterpretation. The document used to communicate the results of surveillances to the scheduling department, called a "green sheet", had a box to indicate whether or not a frequency change was needed. This caused confusion for those cases in which a pump was already in alert (46 day test frequency required). If the results of a surveillance showed it once again in alert, no frequency change was required. This was sometimes interpreted by surveillance scheduling personnel to mean that an alert condition no longer existed. The result was that the tests were incorrectly rescheduled for 92 day (quarterly) frequencies.

LER 85-054 reported a similar event. In this case, increased frequency surveillances were missed on standby service water pumps 1SWP&P2B, P2C, P2D, and the low pressure core spray (LPCS) pump 1E21*PC001. Upon later performance of the surveillance tests, each component was found to be acceptable.

CORRECTIVE ACTION

In order to eliminate the ambiguity which existed in the "green sheets" as described in the root cause section of this LER, the form has been revised. The form, as it now exists, unambiguously states whether or not any components are in alert, and lists them by mark number.

GSU had previously implemented a trending and reviewing program which led to discovery of these events. This program will also serve to help prevent recurrence.

SAFETY ASSESSMENT

With the exception of 1SWP*P2C, the next surveillance subsequent to the missed 46 day test revealed either an acceptable result, which required no increased frequency, or a conditionally acceptable result for which the increased frequency requirement was met. At no time was it necessary to declare any safety related equipment inoperable in these four cases.

For 1SWP*P2C, when the next test was performed, following the missed 46 day surveillance, the pump performance was in the required action range of ASME XI Division 1 TABLE IWP-3100-2. An event history for 1SWP*P2C follows:

1. On 2-8-91, the Division 1 standby service water pump 1SWP*P2C was tested per STP 256-6303. It was conditionally acceptable (in alert) and was required to be tested again in 46 days.

2. The next test on 1SWP*P2C was performed on 5-2-91, 83 days after the last test. The pump failed this STP and Limiting Condition for Operation 91-0157 was entered per Technical Specification 3.7.1.1 (a 30-day shutdown LCO). The pump was declared inoperable per ASME XI IWP-3230(b).

3. A maintenance work order request (MWOR 145177) was written to "troubleshoot/repair/replace as necessary". Pump lift, or impeller to lower case clearance was checked, and found to be 0.103 Inches. This was raised to 0.130 Inches, per the vendor manual. The MWO was then closed out on 5-7-91.

4. STP 256-6303 was reperformed as a post-maintenance test per ASME XI IWP-3111 on 5-7-91. Pump performance was conditionally acceptable (alert), and LCO 91-0157 was no longer in effect as of 5-7-91 at 1910. Pump 1SWP*P2C was declared operable at that time and placed into standby service per the operating procedures of the service water system.

An engineering evaluation was performed to determine whether or not 1SWP*P2C could have performed its safety function on 5-2-91, the date that it failed its surveillance test.

The service water system is required to provide a minimum flow of 5600 gpm for the first 20 minutes of a loss of offsite power, and a minimum flow of 13700 gpm thereafter. Data was gathered from the period during the third refueling outage that the Division 1 standby service water system was in service. An average flow of 14200 gpm was being delivered into actual system friction. The pump differential pressure for 1SWP*P2C, as measured by STP 256-6303 at that time was 75.0 psid. The differential pressure measured for 1SWP*P2C on 5-2-91 was 72.4 psid, or 96.53 % of the differential pressure which is known to have delivered 14200 gpm into system friction. Since the flow is proportional to the square root of differential pressure, it can be shown that on 5-2-91, when 1SWP*P2C was declared inoperable due to its performance in STP 256-6303, Division 1 of standby service water could have delivered in excess of the 13700 gpm required to fulfill its safety function. As a result of this analysis it has been determined that this missed 46 day surveillance had no impact on the ability of the pump to perform its safety function.

In December, 1991, it was discovered that a gasket in the test return orifice assembly of the Division I standby cooling was positioned improperly. This condition resulted in partial occlusion of the orifice bore and gradual deterioration of the gasket. As the gasket degraded, the effective bore size in the orifice increased. Since the apparent flow, as measured across this orifice, is the reference for the pump performance surveillance STP-256-6303, as the gasket degraded the apparent pump differential pressure decreased. This happens because what is believed to be a constant flow is actually increasing as the effective orifice bore increases. This problem was eliminated, and it is now known that what was being trended as pump degradation since startup was actually degradation of this improperly installed gasket. Had this gasket problem not existed, 1SWP*P2C would not have failed its surveillance on 5-2-91, and would never have been declared inoperable.