



GULF STATES UTILITIES COMPANY

December 10, 1990
RBG- 34132
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. 90-038 for River Bend Station - Unit 1. This report is being submitted pursuant to 10CFR50.73.

Sincerely,

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

AE JB
IAE/PDG/DEJ/DCH/JFM/pg

cc: U.S. Nuclear Regulatory Commission
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Arlington, TX 76011

NRC Resident Inspector
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Austin, TX 78757

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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-630) 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 1 OF 0 3

PAGE (3): 1 OF 0 3

TITLE (4): Division I Balance-of-Plant Isolation due to an Error by Design Engineers

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)
11	08	90	90	038	00	12	10	90			0 5 0 0 0
											0 5 0 0 0

OPERATING MODE (9): 5

POWER LEVEL (10): 0

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

<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.406(i)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
<input type="checkbox"/> 20.406(a)(1)(i)	<input type="checkbox"/> 50.38(a)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(a)
<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 50.38(a)(2)	<input type="checkbox"/> 50.73(a)(2)(vi)	<input type="checkbox"/> OTHER (Specify in Abstract below and in Text NRC Form 306A)
<input type="checkbox"/> 20.406(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	
<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
<input type="checkbox"/> 20.406(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):

NAME: L. A. England, Director-Nuclear Licensing

TELEPHONE NUMBER: 5 1 0 1 4 3 1 8 1 1 - 4 1 1 4 1 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

SUPPLEMENTAL REPORT EXPECTED (14):

YES (if yes, complete EXPECTED SUBMISSION DATE): NO:

EXPECTED SUBMISSION DATE (15):

MONTH	DAY	YEAR

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

At 1610 on 11/08/90 with the reactor in Operational Condition 5 (Refueling), while performing maintenance, the loosening of a common neutral connection in the 'A' reactor protection system (RPS) alternate circuit resulted in the momentary interruption of power to the RPS 'A' normal feed. This caused a Division I balance-of-plant (BOP) isolation and consequently, a momentary loss of shutdown cooling. This constitutes an engineered safety feature (ESF) actuation; therefore, this report is submitted pursuant to 10CFR50.73(a)(2)(iv).

The root cause of this event was an error by design engineers in the preparation of a field change notice (FCN). A new drawing issued by the original modification request was revised by the FCN, moving a termination to the wrong location. All electrical design engineers will receive training on this event with emphasis on attention to detail. This training will be completed by March 1, 1991.

During this event, all isolations occurred as designed. Upon restoration of valve, shutdown cooling was restored within 2 minutes and reactor vessel water temperature exhibited no change. Therefore, this event did not adversely affect the health and safety of the public.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 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 9 0	LER NUMBER (5)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9 0	0 3 8	0 0	0 2	OF	0 3

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

REPORTED CONDITION

At 1610 on 11/08/90 with the reactor in Operational Condition 5 (Refueling), while performing maintenance, the loosening of a common neutral connection in the 'A' reactor protection system (RPS) alternate circuit resulted in the momentary interruption of power to the RPS 'A' normal feed. This resulted in a Division I balance-of-plant (BOP) isolation and an RPS half-scam. The Division I BOP isolation included the reactor water cleanup system (RWCU) system (*CE*) and valve 1SFC*MOV121 (loss of alternate shutdown cooling) for approximately 2 minutes. The Division I BOP isolation constitutes an engineered safety feature (ESF) actuation; therefore, this report is submitted pursuant to 10CFR50.73(a)(2)(iv).

INVESTIGATION

This event occurred during the implementation of a modification to add an annunciator relay (*30*), requiring modification of the 'A' RPS alternate circuitry. Field change notice (FCN) 2 to modification request (MR) 89-0056 required loosening the common neutral connection at terminal number JB407-3. When this was implemented, it resulted in a temporary loss of RPS 'A' normal power, resulting in the ESF actuations.

The root cause of this event was an error by design engineers in the preparation of FCN 2. A new drawing issued by this MR was revised by FCN 2, moving the termination at JB407-2 to JB407-3. The engineering task was complicated by the involvement of multiple shifts of design engineers. Nevertheless, the change was contrary to the elementary diagram, and ultimately resulted in the RPS actuation.

A review of previous LERs has revealed no similar events.

CORRECTIVE ACTION

A copy of the condition report documenting this event has been routed to the design engineers involved to remind them that careful attention is required on field change notices (FCNs) affecting non-safety-related circuits and thorough review of work performed on previous shifts is required prior to sign-off of documents. All electrical design engineers will receive training on this event with emphasis on attention to detail. This training will be completed by March 1, 1991.

SAFETY ASSESSMENT

During this event, all isolations occurred as designed. The Division I residual heat removal system (RHR) (*BO*), main steam line drains, main steam and radwaste sample systems (*KN*) were out of service;

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TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F-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.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
RIVER BEND STATION	0 5 0 0 0 4 5 8 9 0	- 0 3 8	- 0 0	0 3	OF	0 3

TEXT (If more space is required, use additional NRC Form 386A's) (17)

therefore, these systems were unaffected by this event. Flow from the RHR "B" pump (*P*), providing alternate shutdown cooling flow via the spent fuel pool cooling assist mode, was interrupted upon isolation of 1SFC*MOV121. Shutdown cooling was restored within 2 minutes upon restoration of the valve and reactor vessel temperature exhibited no change. Therefore this event did not adversely affect the health and safety of the public.

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