GULF STATES UTILITIES COMPANY

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

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January 10, 1992
RBG-36,235
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. 91-021 for River Bend Station - Unit 1. This report is submitted pursuant 10CFR50.73. Based on a discussion with Mr. Elmo Collins of the NRC, the submittal date of this report has been extended.

Sincerely,

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

LAE/PDG/GAB/DCH/JPS/kvm

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

TITLE (4): REACTOR PROTECTION SYSTEM ACTUATION DUE TO OPERATOR FAILURE TO VERIFY THE SCRAM DISCHARGE VOLUME LEVEL

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)
1 2	0 8	9 1	9 1	-	0 2 1	- 0 0	0 1	1 0	9 2		0 5 0 0 0
											0 5 0 0 0

OPERATING MODE (9)	3	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 0	20.402(b)	20.405(c)	X 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)	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 - 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	

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 approximately 1524 on 12/08/91, with the reactor in Operational Condition 3, an unplanned reactor protection system (RPS) actuation occurred when the at-the-controls (ATC) operator placed the control rod drive (CRD) scram discharge volume high water level bypass switches from "bypass" to "normal" without assuring that the scram discharge volume (SDV) water level was less than 49". All control rods were inserted previously and no additional rod motion occurred due to the RPS actuation. This event is reportable pursuant to 10CFR50.73(a)(2)(iv), as an engineered safety feature (ESF) actuation.

Abnormal Operating Procedure (AOP)-0001 ("Reactor Scram") is being revised to include a dedicated section to provide specific instructions for resetting a reactor scram or RPS (*JE*) actuation. This section will require the ATC operator to place the SDV high water level bypass switches to "bypass" as the first step and verify the SDV high level alarm is clear prior to placing the switches in the "normal" position.

REPORTED CONDITION

At approximately 1524 on 12/08/91, with the reactor in Operational Condition 3, an unplanned reactor protection system (RPS) (*JE*) actuation occurred when the at-the-controls (ATC) operator placed the control rod drive (CRD) scram discharge volume high water level bypass switches from "bypass" to "normal" without assuring that the scram discharge volume (SDV) water level was less than 49". All control rods were inserted previously and no additional rod motion occurred due to the RPS actuation. This event is reportable pursuant to 10CFR50.73(a)(2)(iv), as an engineered safety feature (ESF) actuation.

INVESTIGATION

Prior to the event, reactor power had been reduced to 11 percent as part of a normal plant shutdown for generator repairs. At 1510, the ATC operator inserted a manual reactor scram, which resulted in successful insertion of all control rods. In the attempt to place the mode switch in the "shutdown" position, the mode switch key broke off between the "startup" and "refuel" positions. The mode switch was successfully placed in the "shutdown" position with needle-nosed pliers. This resulted in an additional RPS (*JE*) actuation following the reactor scram which occurred at 1510. Note that this actuation is not considered reportable. Per procedure the ATC attempted to take the mode switch key to the shutdown position. When this happens an RPS actuation is an expected part of the system response. The ATC operator had taken the SDV high water level bypass switches to "bypass" per Abnormal Operating Procedure (AOP)-0001, "Reactor Scram." Following this, he reset the RPS (*JE*) actuation, to prevent excessive temperature changes in the reactor vessel bottom head. The subsequent actions of AOP-0001 had been initiated following the RPS actuation. When the hydraulic control unit (HCU) accumulator faults cleared, the ATC operator returned the SDV high level bypass switches to "normal", but failed to verify the SDV level was less than 49" or that the SDV high level annunciator (*LA*) was clear. At this point, the RPS actuation occurred per plant design. This actuation was not a part of a preplanned activity and thus is reportable under 10CFR50.73 as an ESF actuation.

ROOT CAUSE

The root cause of this event was a lack of attention to detail by the ATC operator in verifying that the scram discharge volume level was less than 49" prior to returning the SDV high level bypass switches to "normal". The event was complicated by the breaking of the mode switch key and the subsequent RPS (*JE*) actuation that occurred. After resetting the RPS actuation, the ATC operator was focused on the

procedural note in AOP-0001 that informs the operator that an RPS (*JE*) actuation with no rod movement will take the SDV longer to fill (greater than one minute). This note was added as a corrective action of LER 90-028, to address the specific case in which the plant is at reduced reactor pressure and/or there is no control rod motion. While the note is considered to be a contributing factor, the ATC operator's lack of attention to detail is the root cause of this event. When the ATC operator placed the bypass switches in the "normal" position it had been several minutes since he had reset the last RPS actuation, and he believed that the SDV was drained. Had he responded properly, he would have verified the SDV level or that the SDV high level annunciator was clear prior to placing the bypass switches in the "normal" position.

A similar event described in LER 90-028 reported an unplanned RPS actuation that occurred while the plant was shutdown. In this case, the ATC operator failed to place the high water level bypass switches in the "bypass" position before resetting a previous (planned) RPS (*JE*) actuation. The unplanned RPS (*JE*) actuation resulted from this action. As a result of this event, a caution was added to AOP-001 to remind operators that at reduced reactor pressure and/or with no control rod motion, the SDV takes longer to fill and reach the high level trip. While RPS actuations during shutdown resulted in both events (LER 90-028 and 91-021), the conditions leading to each event, and the root causes are different.

CORRECTIVE ACTION

Abnormal Operating Procedure (AOP)-0001 ("Reactor Scram") is being revised to include a dedicated section to provide specific instructions for resetting a reactor scram or RPS (*JE*) actuation. This section will require the ATC operator to place the SDV high water level bypass switches to "bypass" as the first step and verify the SDV high level alarm is clear prior to placing the switches in the "normal" position. This revised section is designed to address any circumstances in which a reactor scram or RPS actuation may need to be reset. Note that this revised section supersedes the note provided as corrective action in LER 90-028.

Simulator training will be enhanced to include human factors by training the operators to place the bypass switches in the "normal" position one Division at a time, instead of simultaneously. In the event that the SDV level is not drained below 49", taking only one Division to the "normal" position will result in a half-scram, rather than a full RPS actuation.

SAFETY ASSESSMENT

The control rods were fully inserted prior to this event. No additional rod motion occurred as a result of the unplanned RPS actuation, and the RPS system (*JE*) responded as designed.