NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

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 3

TITLE (4)
Reactor Scram On IRM Upscale

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 6	1 4	8 6	8 6	0 4 2	0 1	0 5	0 6	8 8		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9): 2
POWER LEVEL (10): 0 0 1

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)	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
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 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 2326 on 6/14/86 during restart from scram 86-17 (turbine high vibration, ref. LER 86-041) the unit tripped on intermediate range monitor (IRM) upscale from approximately 1 percent power.

With the reactor at approximately 750 psig the unit operator (UO) began aligning steam line drains per the startup procedure in use at the time. After opening two 3 inch drains, pressure began to reduce rapidly. The pressure reduction resulted in a reactor water level swell and power decrease due to increased voids. The IRMs were down ranged by the at the controls (ATC) operator to maintain onscale readings. The swell also caused closure of the startup regulating valve, which along with the reactor water cleanup (RWCU) return diversion, resulted in water level reduction. As level decreased the startup regulating valve began to open. With the startup regulating valve now fully open, and the IRMs down ranged due to the reduced power levels, the significant mass flow of cold feedwater to the vessel resulted in a flux increase to the IRM upscale setpoint which caused a reactor scram.

The general operating procedure has been revised to include appropriate cautions in regard to opening steam drains. Specific guidance and training was given to all crews as to the causes of the event.

There was no adverse affect on the health and safety of the public as a result of this event.

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REPORTED CONDITION

At 2326 on 6/14/86 during restart from scram 86-17 (turbine high vibration, ref. LER 86-041) the unit tripped on intermediate range monitor (IRM) upscale.

With the reactor at approximately 750 psig, the unit operator (UO) began aligning steam line drains (*DRN*) per the startup procedure in use at the time. After opening two 3 inch drains, pressure began to reduce rapidly. The at the controls (ATC) operator continued to withdraw rods in an effort to maintain reactor pressure. The pressure reduction resulted in a reactor water level swell and power decrease due to increased voids. The increased water level caused the startup feedwater regulating valve to shut and the decreased power resulted in IRM downscales. The latter effect produced rod withdrawal blocks. Therefore, the IRMs were down ranged by the ATC operator to maintain onscale readings and allow further rod withdrawal.

With the startup feedwater regulating valve (*FCV*) shut, level began to decrease. Additionally, the feedwater lineup is such that the long cycle cleanup valve (*V*) is open to maintain the startup feedwater regulating valve in mid-position for smoother water level control. With the long cycle valve open and feedwater flow isolated at the regulating valves, there is a path for the reactor water cleanup (RWCU) (*CE*) unit return to the vessel to be diverted to the condenser. This caused the rate of the water level reduction to be increased. While this was occurring the UO was requested to reclose the last drains opened, which halted the pressure reduction at approximately 500 psig.

As level decreased, the startup regulating valve began to open. Initially, the flow through the opening regulating valve is being diverted to the condenser (*SG*) via the long cycle recirculation valve until back pressure can be built up to greater than reactor pressure. To aid in returning feed flow to the vessel, the ATC operator began to partially close the long cycle recirculation valve (NOTE: minimum water level reached was 20-25 in.). With the startup regulating valve now fully open, and the IRMs down ranged, the significant mass flow of cold feedwater to the vessel resulted in a flux increase to the IRM upscale setpoint which caused the reactor scram.

INVESTIGATION

The root cause of the initiation of the transient which lead to a scram is the premature opening of the steam drains prior to sufficient steam/power to maintain pressure. This occurred as a result of inadequate precautions in the startup procedure to alert the operator to this potential.

CORRECTIVE ACTION

The general operating procedure has been revised to include appropriate cautions in regard to opening steam drains. Specific guidance and training was given to all crews as to maintaining adequate communication and ensuring full understanding of the causes of the event.

Design Engineering has evaluated the performance of the feedwater system during this transient. Modifications were considered for the enhancement of level control at low power levels; however, the evaluation revealed that system performance was satisfactory and indicated no enhancements were required.

SAFETY CONSEQUENCES

There was no adverse effect on the health and safety of the public as a result of this event since the reactor was placed in a more conservative condition by the scram, and the reactor water level was maintained well above the low water level scram setpoint at all times during this event.

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

GULF STATES UTILITIES COMPANY

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AREA CODE 504 635-6094 346-8651

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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. 86-042, Revision 1 for River Bend Station - Unit 1. This report is being submitted concerning revised corrective action.

Sincerely,

L. A. England

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

JEB/TFP/AOF/JRL/RRS/ch

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