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December 17, 2001

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Subject: River Bend Station
Docket No. 50-458
License No. NPF-47
Licensee Event Report 50-458 / 01-004-00

File Nos. G9.5, G9.25.1.3

RBG-45890
RBF1-01-0274

Ladies and Gentlemen:

In accordance with 10CFR50.73, enclosed is the subject Licensee Event Report. There are no commitments in this document.

Sincerely,

Rick J. King

RJK/dhw
enclosure

IE22

cc: U. S. Nuclear Regulatory Commission
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NRC FORM 366 (1-2001) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 6-30-2001

Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
River Bend Station	05000 458	1 OF 3

TITLE (4) Automatic Start of Division II Diesel Generator Due to Loss of Division II 4160 Volt Normal Feeder Breaker

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
										05000
10	17	2001	2001	004	00	12	17	2001	FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9)	1
POWER LEVEL (10)	80

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) (11)

	20.2201(b)		20.2203(a)(3)(ii)		50.73(a)(2)(ii)(B)		50.73(a)(2)(ix)(A)
	20.2201(d)		20.2203(a)(4)		50.73(a)(2)(iii)		50.73(a)(2)(x)
	20.2203(a)(1)		50.36(c)(1)(i)(A)	X	50.73(a)(2)(iv)(A)		73.71(a)(4)
	20.2203(a)(2)(i)		50.36(c)(1)(ii)(A)		50.73(a)(2)(v)(A)		73.71(a)(5)
	20.2203(a)(2)(ii)		50.36(c)(2)		50.73(a)(2)(v)(B)		OTHER
	20.2203(a)(2)(iii)		50.46(a)(3)(ii)		50.73(a)(2)(v)(C)		Specify in Abstract below or in NRC Form 366A
	20.2203(a)(2)(iv)		50.73(a)(2)(i)(A)		50.73(a)(2)(v)(D)		
	20.2203(a)(2)(v)		50.73(a)(2)(i)(B)		50.73(a)(2)(vii)		
	20.2203(a)(2)(vi)		50.73(a)(2)(i)(C)		50.73(a)(2)(viii)(A)		
	20.2203(a)(3)(i)		50.73(a)(2)(ii)(A)		50.73(a)(2)(viii)(B)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
J.W. Leavines, Manager - Licensing	225-381-4642

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

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
X	EA	OB	GE	YES					

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 15 single-spaced typewritten lines) (16)

On October 17, 2001, at approximately 2:48 a.m. CDT, with the plant at 80 percent power, the normal feeder breaker to the Division II safety-related 4160 volt AC switchgear opened unexpectedly. This caused a loss of power to the Division II 4160 volt and 480 volt AC systems, and an automatic start signal to the Division II diesel generator (DG). This event is being reported in accordance with 10CFR50.73(a)(2)(iv)(a) as a valid actuation of a safety system. This event also caused a loss of power to the Division II reactor protection system circuitry, resulting in the invalid actuation of containment isolation valves.

The cause of the 4160 volt feeder breaker trip was determined to be a failed optical isolator in the preferred station service primary protection circuitry. The failure was internal to the isolator card, and resulted in a false signal to the 4160 volt feeder breaker's trip coil.

This event was of minimal significance with respect to the health and safety of the public. The Division II DG automatically started and restored power to the Division II AC electrical systems as designed. Actuations of containment isolation valves and emergency ventilation systems occurred as expected for a loss of power. Plant operation was not interrupted.

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
River Bend Station	05000-458	2001	- 004 -	00	2 OF 3

NARRATIVE *(If more space is required, use additional copies of NRC Form 366A)* **(17)**

REPORTED CONDITION

On October 17, 2001, at approximately 2:48 a.m. CDT, with the plant at 80 percent power, the normal feeder breaker (**52**) to the Division II safety-related 4160 volt AC switchgear opened unexpectedly. This caused a loss of power to the Division II 4160 volt and 480 volt AC systems, and an automatic start signal to the Division II diesel generator (DG)(**DG**). This event is being reported in accordance with 10CFR50.73(a)(2)(iv)(a) as a valid actuation of a safety system.

This event also caused a loss of power to the Division II reactor protection system circuitry, resulting in the invalid actuation of containment isolation valves in the following systems: reactor water cleanup, reactor building floor and equipment drains, reactor coolant sampling, containment airlock air supply, and containment ventilation systems. Automatic actuations of the following systems occurred: standby gas control, annulus mixing, control building ventilation, and fuel building ventilation.

The Division II DG responded as expected and automatically restored power to the Division II electrical systems. In addition, all the system actuations listed above were in accordance with plant design in response to the loss of power. After an initial assessment of the transient, operators reset the containment isolation logic, and restored ventilation systems to their normal configuration. The DG remained in service while the malfunction was investigated.

INVESTIGATION AND IMMEDIATE CORRECTIVE ACTION

Engineering and maintenance personnel examined the relay panel for the offsite power circuits leading to the Division II switchgear, and all lockout relays were found in the reset state. A walkdown of the Division II switchgear did not reveal any tripped overcurrent relays. However, a pair of normally-open contacts in the feeder breaker's trip coil were found closed.

The cause of the 4160 volt feeder breaker trip was determined to be a failed optical isolator (**OB**) in the preferred station service primary protection circuitry. The failure was internal to the isolator card, and resulted in a false signal to the feeder breaker's trip coil. This circuitry would normally act to isolate the safety-related switchgear from a fault in the station service transformer or the offsite power line.

The optical isolator card was replaced, and the Division II feeder breaker was closed at approximately 7:33 p.m. CDT the same day. The DG was secured and returned to its normal standby configuration at approximately 10:10 p.m. CDT.

CORRECTIVE ACTION TO PREVENT RECURRENCE

River Bend currently has no periodic replacement schedule for optical isolator cards. Isolator cards normally perform alarm and annunciation functions. However, a small number are used in control circuitry. A review of design documentation was performed, and a list of all applications where

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
River Bend Station	05000-458	2001	- 004 -	00	3 OF 3

NARRATIVE *(If more space is required, use additional copies of NRC Form 366A)* **(17)**

optical isolators are used to either actuate or prevent operation of equipment was assembled. This information will be used to determine whether a program of periodic replacement is appropriate.

PREVIOUS OCCURRENCE EVALUATION

A search of the reportable events at River Bend since January 1995 found no similar events.

SAFETY SIGNIFICANCE

This event was of minimal significance with respect to the health and safety of the public. The Division II DG automatically started and restored power to the Division II AC electrical systems as designed. Actuations of containment isolation valves and emergency ventilation systems occurred as expected for a loss of power. Plant operation was not interrupted.

(NOTE: Energy industry component identification codes are annotated as (**XX**).)