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March 9, 2005

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

Subject: Licensee Event Report 50-458 / 05-001-00
River Bend Station – Unit 1
Docket No. 50-458
License No. NPF-47

File Nos. G9.5, G9.25.1.3

RBG-46408
RBF1-05-0030

Ladies and Gentlemen:

In accordance with 10CFR50.73, enclosed is the subject Licensee Event Report.
This document contains no commitments.

Sincerely,

A handwritten signature in cursive script, appearing to read "David N. Lorfing".

David N. Lorfing
Manager – Licensing (acting)

DNL/dhw
Enclosure

IE22

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cc: U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011

NRC Sr. Resident Inspector
P. O. Box 1050
St. Francisville, LA 70775

INPO Records Center
E-Mail

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Public Utility Commission of Texas
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Austin, TX 78711-3326

Mr. Prosanta Chowdhury
Louisiana Department of Environmental Quality
Office of Environmental Compliance
Surveillance Division
Radiological Emergency Planning & Response Unit
P.O. Box 4312
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LICENSEE EVENT REPORT (LER)

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

Estimated burden per response to comply with this mandatory 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 and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@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 an 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.

1. FACILITY NAME River Bend Station, Unit 1	2. DOCKET NUMBER 05000 458	3. PAGE 1 of 3
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4. TITLE
Unplanned Manual Scram Due to Indication of Ground Fault in Main Generator

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
01	15	2005	2005	- 001 -	00	03	09	2005	FACILITY NAME	DOCKET NUMBER
										05000
										05000

9. OPERATING MODE 1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply)									
10. POWER LEVEL 100	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)						
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)						
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)						
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)						
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)						
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)						
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)						
<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER							
<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A							

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME David N. Lorfing, Manager – Licensing (acting)	TELEPHONE NUMBER (Include Area Code) 225-381-4157
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED <input checked="" type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input type="checkbox"/> NO	15. EXPECTED SUBMISSION DATE	MONTH 07	DAY 01	YEAR 2005
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On January 15, 2005, at 2:12 a.m. CST, while the plant was operating at 100 percent power, a manual reactor scram was initiated. This action was procedurally required in response to an alarm received at 2:10 a.m. which indicated a ground fault in the main generator. The plant shutdown proceeded normally, and safety systems responded as required. This event is being reported in accordance with 10CFR50.73(A)(2)(iv)(a) as a condition that required the manual actuation of the reactor protection system. Reactor water level was adequately controlled by the main feedwater system. No actuations of emergency core cooling systems, reactor safety relief valves, or standby diesel generators were required. The causal analysis of this event is still in progress, and the results will be reported in a supplement to this report. There were no safety systems out of service at the time of the event. This event was of minimal safety significance.

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		2005	- 001	- 00		

REPORTED CONDITION

On January 15, 2005, at 2:12 a.m. CST, while the plant was operating at 100 percent power, a manual reactor scram was initiated. This action was procedurally required in response to an alarm (**ALM**) received at 2:10 a.m. which indicated a ground fault in the main generator (**TG**). The plant shutdown proceeded normally, and safety systems responded as required. Reactor water level was adequately controlled by the main feedwater system. No actuations of emergency core cooling systems, reactor safety relief valves, or standby diesel generators were required.

INVESTIGATION AND IMMEDIATE CORRECTIVE ACTIONS

Troubleshooting activities were initiated to determine the cause for the generator field ground alarm. An inspection of the generator exciter system was performed, and no evidence of damage was found. Resistance checks performed on the rotor, rectifier banks, and transformers found that the readings were acceptable to confirm that no ground was present. The machine field ground detector relays were found in the tripped condition. These were reset and the alarm cleared. This indicated that the ground condition was no longer present. Portions of the field control circuitry were individually isolated in an attempt to assure that no real ground occurred.

Testing of the relay (**74**) which actuates the ground fault alarm found it to be out of calibration, such that it was much more sensitive to ground currents than specified. Technicians recalibrated the relay and restored it to service. Additional testing was performed during plant startup with the turbine at rated speed. This testing did not find any grounds present on the system.

Following plant startup, monitoring of the main generator determined that a small ground existed in the system and that the ground current was slowly increasing. The results of the initial investigation were re-evaluated in light of this new indication. Inspections of the affected equipment determined that one of the five rectifier (**RECT**) banks in the generator excitation control system was the source of the ground, and it was removed from service. Contingency plans were developed for operation in this condition with conservative trigger points built in, including a decision step to remove the unit from service if necessary.

In the interim, there have been indications of a hydrogen leak into the generator stator cooling system. Such leaks affect stator cooling water chemistry as well as stator corrosion properties. Deposition of stator corrosion products in the rectifier cooling tubes is considered to be the most likely cause of the generator field ground. The unit was shut down on February 19 to perform a partial investigation of this hydrogen leak, and other work.

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CAUSAL ANALYSIS and CORRECTIVE ACTIONS TO PREVENT RECURRENCE

The results of the causal analysis for this event will be reported in a supplement to this LER.

SAFETY SIGNIFICANCE

The plant responded as designed to the manual scram, and no actuations of emergency core cooling systems, reactor safety relief valves, or standby diesel generators were required. This event was of minimal safety significance.

(NOTE: Energy Industry Component Identification codes are annotated as (**XX**).)