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July 19, 2007

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

Subject: Licensee Event Report 50-458 / 07-003-00
River Bend Station – Unit 1
Docket No. 50-458
License No. NPF-47

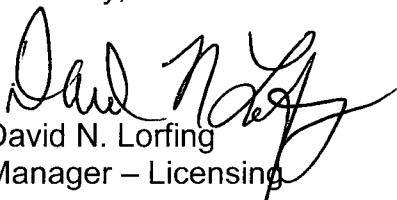
File Nos. G9.5, G9.25.1.3

RBG-46713
RBF1-07-0117

Ladies and Gentlemen:

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

Sincerely,


David N. Lorfing
Manager – Licensing

DNL/dhw
Enclosure

IE22
NRR

Licensee Event Report 50-458 / 07-003-00
July 19, 2007
RBG-46713
RBF1-07-0117
Page 2 of 2

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

NRC Sr. Resident Inspector
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Baton Rouge, LA 70821-4312

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 4
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4. TITLE
Unanalyzed Condition of Emergency Diesel Generator in Post-Fire Safe Shutdown Scenario

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
05	21	2007	2007	- 003 -	00	07	19	2007	FACILITY NAME	DOCKET NUMBER 05000
									FACILITY NAME	DOCKET NUMBER 05000

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

Specify in Abstract below
or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME David N. Lorfing, Manager – Licensing	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

☐ YES (If yes, complete 15. EXPECTED SUBMISSION DATE) ☒ NO

15. EXPECTED SUBMISSION DATE

MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On May 21, 2007, a review of industry operating experience (OE) related to emergency diesel generators (DG) found a condition which is not consistent with the assumptions of the River Bend Station (RBS) post-fire safe shutdown analysis. That analysis assumes that the high temperature trips on the Division 1 DG would remain active following a start signal resulting from a loss of offsite power (LOP). This OE review found that when the DG starts following a LOP, non-critical trips (such as high temperature) are bypassed. With the non-critical trips bypassed, the DG will continue to run without sufficient cooling, likely resulting in damage to the engine. It appears that, during past revisions of the safe-shutdown analyses, reviewers did not adequately assess all potential failure modes resulting from multiple spurious actuations. This is being reported in accordance with 10CFR50.73(a)(2)(ii)(B) as a condition resulting in the plant being in an unanalyzed condition that significantly degrades plant safety. This condition does not cause the Division 1 DG to be inoperable with respect to its function required in the accident analysis and Technical Specifications. A pre-existing Standing Order that prohibits welding and grinding in the main control room during Modes 1, 2, and 3 was revised to specifically address this condition.

LICENSEE EVENT REPORT (LER)
FAILURE CONTINUATION

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
River Bend Station – Unit 1	05000-458	2007	- 003	- 00	2 OF 4

REPORTED CONDITION

On May 21, 2007, a review of industry operating experience (OE) related to emergency diesel generators (**DG**) found a condition which is not consistent with the assumptions of the River Bend Station (RBS) post-fire safe shutdown analysis. That analysis assumes that the high temperature trips on the Division 1 DG would remain active following a start signal resulting from a loss of offsite power (LOP). This OE review found that when the DG starts following a LOP, non-critical trips (such as high temperature) are bypassed. With the non-critical trips bypassed, the DG will continue to run without sufficient cooling, likely resulting in damage to the engine. This is being reported in accordance with 10CFR50.73(a)(2)(ii)(B) as a condition resulting in the plant being in an unanalyzed condition that significantly degrades plant safety.

CAUSAL ANALYSIS

10CFR50 Appendix R states that for alternate shutdown capability (i.e., shutdown from outside the main control room), support systems for critical post-fire safe shutdown components must remain free from fire damage. Generic Letter 86-10, "Implementation of Fire Protection Requirements" states that the following assumptions are required for evaluation of a control room fire: 1) fire induced spurious operation of safe shutdown components has occurred; 2) offsite power is lost and; 3) loss of automatic starting of the onsite AC generators as well as the automatic function of valves and pumps whose circuits could be affected by a control room fire.

In addition to loss of automatic start of the emergency diesel generators, the post-fire safe shutdown analysis must also evaluate the consequences if the diesel generators do start concurrent with fire induced multiple spurious actuations. Since control circuits for motor operated valves for the standby service water system are routed in the main control room, fire induced shorts could place these valves in a position that would prevent standby service water from cooling the Division 1 DG. In the time required for operators to evacuate the control room and re-establish control of the standby service water system at the Division 1 Remote Shutdown panel, damage to the Division 1 DG could render it incapable of performing its post-fire function.

In the original design and licensing basis of RBS, all DG trip signals except engine overspeed and generator differential overcurrent are bypassed after a LOP start, or a loss of coolant accident (LOCA) start, or both.

NRC Regulatory Issue Summary (RIS) 2004-03 Rev. 1, issued in December 2004, advised licensees that multiple concurrent faults must be assumed in a main control room fire. This represented a change in regulatory interpretation from that used in the original design and licensing of the plant. In the subsequent revision of RBS' Post-Fire Safe Shutdown Analysis, the reviewers were unaware of the fact that the high temperature

LICENSEE EVENT REPORT (LER)
FAILURE CONTINUATION

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
River Bend Station – Unit 1	05000-458	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 4
		2007	- 003	- 00	

trips are bypassed in the LOP event. It appears that the reviewer did not adequately assess all potential failure modes resulting from multiple spurious actuations. Among the reviewer's tasks was the requirement to identify issues or discrepancies which needed resolution, including a request to "determine the time the Division 1 DG can operate near full load without cooling water and reconcile with the time to establish control at the local and remote shutdown panels." The response to this item took credit for the high temperature trips being active following a LOP event. This erroneous assumption appears to have been based solely on previous revisions of the safe shutdown analysis.

IMMEDIATE ACTIONS

This condition does not cause the Division 1 DG to be inoperable with respect to its safety function specified in the accident analysis and Technical Specifications. A pre-existing Standing Order that prohibits welding and grinding in the main control room during Modes 1, 2, and 3 was revised to specifically address this condition.

CORRECTIVE ACTION

Various options for correcting this condition are being evaluated, including:

- re-assessing the design and licensing requirements related to DGs in the safe shutdown scenario,
- validating the operator's response time for restoring cooling water to the DG following a main control room fire / LOP event, and,
- modifying the DG to retain the function of the high temperature trip after starting in response to a LOP.

Actions for addressing this condition are being tracked in the station's corrective action program.

SAFETY SIGNIFICANCE

This condition is unique to the Division 1 DG. The Division 3 DG, which also has remote shutdown transfer switching in its design, retains all its trips active in the LOP event, bypassing them only in a LOCA response. The Division 2 DG has no remote shutdown transfer switching capability, and is considered by the safe shutdown analysis to be damaged in the fire. This condition does not cause the Division 1 DG to be inoperable with respect to its function required in the accident analysis and Technical Specifications.

This condition results in a noncompliance with the requirements of 10CFR50 Appendix R, for a specific scenario that has a low likelihood of occurrence. Plant equipment remains

LICENSEE EVENT REPORT (LER)
FAILURE CONTINUATION

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
River Bend Station – Unit 1	05000-458	2007	- 003	- 00	4 OF 4

capable of performing the remaining design functions. The scope of this analysis deficiency is limited to the main control room fire scenario with multiple concurrent failures. The main control room is continuously manned, and the affected cables in the under-floor area are protected by automatic fire detection and suppression systems. Introduction of ignition sources, such as welding and grinding, are strictly controlled by station procedures.

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