



**Entergy Operations, Inc.**

River Bend Station  
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**David N. Lorfing**  
Manager-Licensing

RBG-47131

March 21, 2011

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

Subject: Licensee Event Report 50-458 / 11-001-00  
River Bend Station – Unit 1  
Docket No. 50-458  
License No. NPF-47

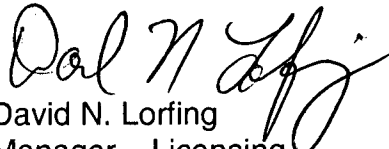
File No. G9.5

RB1-11-0056

Dear Sir or Madam:

In accordance with 10CFR50.73, enclosed is the subject Licensee Event Report.  
This document contains no commitments. If you have any questions, please contact  
me at 225-381-4157.

Sincerely,

  
David N. Lorfing  
Manager – Licensing

Enclosure

IE22  
NR

Licensee Event Report 50-458 / 11-001-00  
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cc: U. S. Nuclear Regulatory Commission  
Region IV  
612 East Lamar Blvd., Suite 400  
Arlington, TX 76011-4125

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

INPO Records Center  
E-Mail (MS Word format)

Mr. Jim Calloway  
Public Utility Commission of Texas  
1701 N. Congress Ave.  
Austin, TX 78711-3326

Mr. Jeffrey P. Meyers  
Louisiana Department of Environmental Quality  
Attn: OEC-ERSD  
P.O. Box 4312  
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: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA/Privacy Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to [infocollects.resource@nrc.gov](mailto:infocollects.resource@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

**4. TITLE**

Unplanned Actuation of Standby Service Water System Due to Procedure Inadequacy

**5. EVENT DATE**

MONTH	DAY	YEAR
01	20	2011

**6. LER NUMBER**

YEAR	SEQUENTIAL NUMBER	REV NO.
2011	001-00	

**7. REPORT DATE**

MONTH	DAY	YEAR
03	21	2011

**8. OTHER FACILITIES INVOLVED**

FACILITY NAME	DOCKET NUMBER
	05000
FACILITY NAME	DOCKET NUMBER
	05000

**9. OPERATING MODE**

5

**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"/> 20.2203(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<br>or in NRC Form 366A |

**10. POWER LEVEL**

0

**12. LICENSEE CONTACT FOR THIS LER**

## FACILITY NAME

David N. Lorfing, Manager – Licensing

## TELEPHONE NUMBER (Include Area Code)

225-381-4157

**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
n/a									

**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)

At 2:34 p.m. CST on January 20, 2011, while the plant was in a refueling outage, standby service water (SSW) pump "C" started automatically during system realignment. The Division 1 SSW subsystem (pumps "A" and "C") was being started to facilitate maintenance on the normal service water system. When the "A" pump was manually started, the pressure transient caused by the realignment of the motor-operated valves in the system caused a momentary low system pressure, actuating SSW pump "C" automatically. This event resulted from a weakness in the operating procedure, in that the intended system configuration for this operation exceeded the flow capacity for one pump. Actions are being taken to strengthen this and other similar procedures to prevent recurrence. This event is being reported in accordance with 10CFR50.73(a)(2)(iv)(A) as a condition that resulted in the automatic actuation of the "C" SSW pump.

# **LICENSEE EVENT REPORT (LER)** **CONTINUATION SHEET**

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River Bend Station – Unit 1	05000 -458	YEAR	SEQUENTIAL NUMBER	REV. NO.	2 OF 3
		2011 -- 001 -- 00			

## **REPORTED CONDITION**

At 2:34 p.m. CST on January 20, 2011, while the plant was in a refueling outage, standby service water (SSW) (BS) pump (\*\*P\*\*) "C" started automatically during system realignment. The Division 1 SSW subsystem (pumps "A" and "C") was being started to supply necessary cooling loads during the outage. When the "A" pump was manually started, the pressure transient caused by the realignment of the motor-operated valves in the system caused a momentary low system pressure, actuating SSW pump "C" automatically.

This event is being reported in accordance with 10CFR50.73(a)(2)(iv)(A) as a condition that resulted in the automatic actuation of the "C" SSW pump. The pump actuated as designed in response to a momentary low pressure signal in the non-safety related normal service water system.

## **CAUSAL ANALYSIS**

As part of the refueling outage that was in progress at the time of the event, the Division 1 SSW subsystem was being started to facilitate maintenance on the normal service water system. Operators were executing the system operating procedure for a manual start. The procedure contains a chart for estimating the system flow demands for various loads and configurations. However, the chart provided no information concerning the flow required for the residual heat removal or spent fuel pool cooling systems. No notes or warnings were included in the procedure prior to the performance of a step that has the potential to cause the actuation of a standby pump.

The intended system configuration for this operation exceeded the flow capacity for one pump. During the valve alignment, a momentary low system pressure actuated SSW pump "C" automatically.

## **PREVIOUS OCCURRENCE EVALUATION**

Two actuations of SSW that occurred during system configuration changes were reported by River Bend Station in 2006 (LERs 050-458/2006-03-00 and 050-458/2006-05-00). The investigation of this event found that the corrective actions for those events did not address potential procedural vulnerabilities to inadvertent SSW actuations similar to the reported event. Weaknesses in the affected procedures will be addressed by the corrective action plan for this event.

# **LICENSEE EVENT REPORT (LER) CONTINUATION SHEET**

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
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		2011 -- 001 -- 00			

## **CORRECTIVE ACTION TO PREVENT RECURRENCE**

The following actions have been incorporated into the station's corrective action program:

- 1) An engineering evaluation has been performed to determine the system configurations that can be supported by the capacity of one SSW pump.
- 2) The results of the engineering evaluation will be incorporated into a new revision of the system operating procedure, as well as other procedures that present a vulnerability to unplanned actuations of SSW.

## **SAFETY SIGNIFICANCE**

The "C" SSW pump responded as designed to a valid low pressure signal. Therefore, this event was of minimal significance with regard to the health and safety of the public.

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