



Entergy Operations, Inc.  
River Bend Station  
5485 U. S. Highway 61N  
St. Francisville, LA 70775  
Tel 225 381 4374  
Fax 225 381 4872  
eolson@entergy.com

Eric W. Olson  
Site Vice President

RBG-47357

April 18, 2013

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

Subject: Licensee Event Report 50-458 / 2013-001-00  
River Bend Station – Unit 1  
Docket No. 50-458  
License No. NPF-47

RBF1-13-0045

Dear Sir or Madam:

In accordance with 10 CFR 50.73, enclosed is the subject Licensee Event Report.  
This document contains no commitments. If you have any questions, please contact  
Mr. Joseph Clark at 225-381-4177.

Sincerely,

A handwritten signature in black ink, appearing to read "Eric W. Olson".

EWO/dhw

Enclosure

IE22  
NRE

A standard recycling symbol consisting of three chasing arrows forming a triangle.

Licensee Event Report 50-458 / 2013-001-00  
April 18, 2013  
RBG-47357  
RBF1-13-0045  
Page 2 of 2

cc: U. S. Nuclear Regulatory Commission  
Region IV  
1600 East Lamar Blvd.  
Arlington, TX 76011-4511

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

INPO Records Center  
E-Mail (MS Word format)

Central Records Clerk  
Public Utility Commission of Texas  
1701 N. Congress Ave.  
Austin, TX 78711-3326

Department of Environmental Quality  
Office of Environmental Compliance  
Radiological Emergency Planning and Response Section  
JiYoung Wiley  
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**

Operations Prohibited by Technical Specifications for Operations With a Potential to Drain the Reactor Vessel

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
03	02	2013	2013-001-00			04	18	2013	n/a	05000
									n/a	05000

**9. OPERATING MODE**

5

**10. POWER LEVEL**

0

**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)(vii)(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 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 checked="" 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 |

**12. LICENSEE CONTACT FOR THIS LER**

FACILITY NAME

Joseph A. Clark, Manager – Licensing

TELEPHONE NUMBER (Include Area Code)

225-381-4177

**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)

On March 2, 2013, at approximately 1448 CST, with the plant in a refueling outage, maintenance on the reactor recirculation system was commenced without taking the required actions to comply with the applicable Technical Specifications. This maintenance constituted operations with a potential to drain the reactor vessel, and the required action for such an activity is restoration of the integrity of primary containment. This action was not taken, and the provisions of NRC Enforcement Guidance Memorandum 11-003 (Rev. 1) were instead invoked. The maintenance was completed and compliance with Technical Specifications was restored at 0830 CST on March 7. This event is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as operations prohibited by Technical Specifications, as additionally specified by the Enforcement Guidance Memorandum.

# LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
River Bend Station – Unit 1	05000 -458	YEAR	SEQUENTIAL NUMBER	REV. NO.	2 OF 3
		2013 -- 001 -- 00			

## REPORTED CONDITION

On March 2, 2013, at approximately 1448 CST, with the plant in a refueling outage, maintenance on the reactor recirculation system was commenced without taking the required actions to comply with the applicable Technical Specifications (TS). This maintenance constituted operations with a potential to drain the reactor vessel (OPDRV), and the required action for such an activity is restoration of the integrity of primary containment. This action was not taken, and the provisions of NRC Enforcement Guidance Memorandum 11-003 (Rev. 1) (EGM) were instead invoked. The maintenance was completed and TS compliance was restored at 0830 CST on March 7. This event is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as operations prohibited by Technical Specifications, as additionally specified by the EGM.

## EVENT DESCRIPTION

An OPDRV is an activity that could result in the draining or siphoning of the reactor pressure vessel (RPV) water level below the top of fuel without crediting the use of mitigating measures to terminate the draining prior to uncovering fuel. Based on Technical Specification applicability, an OPDRV is a change to the applicability as related to the Limiting Condition for Operation (LCO), and therefore treated much like a mode change.

The NRC issued Revision 1 of the EGM on December 20, 2012, to provide guidance on how to disposition boiling water reactor licensee noncompliance with TS containment requirements during OPDRV operations. Certain safety systems must be operable during OPDRV activities to mitigate drain-down events and to provide protection against untreated fission product release in the event that the RPV water level drops below irradiated fuel. The TS does not define the term OPDRV or identify specific plant actions that constitute OPDRV activities. Because a definition is not provided, the NRC staff expects licensees to use the plain language meaning of the OPDRV wording for determining applicability. This means that any activity that could potentially result in draining or siphoning the RPV water level below the top of the fuel without taking credit for mitigating measures would be an OPDRV activity.

In order to utilize the EGM and be eligible for enforcement discretion, the licensee is required to:

- (1) adhere to the NRC plain language meaning of OPDRV activities,
- (2) meet the requirements which specify the minimum makeup flow rate and water inventory based on OPDRV activities with long drain-down times,

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

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
River Bend Station – Unit 1	05000 -458	YEAR	SEQUENTIAL NUMBER	REV. NO.	3 OF 3
		2013 -- 001 -- 00			

(3) ensure that adequate defense-in-depth is maintained to minimize the potential for the release of fission products by monitoring RPV level to identify the onset of a loss of inventory event by maintaining the capability to isolate the potential leakage paths, by prohibiting Mode 4 (cold shutdown) OPDRV activities, by prohibiting movement of irradiated fuel, and,

(4) follow all other Mode 5 TS requirements for OPDRV activities.

The station used the provisions of the EGM in order to replace the pump seals and the flow control valve packing in the "A" loop of the reactor recirculation system. When the loop was isolated to set the required conditions for the maintenance, the technicians determined that the baseline leakage through the loop isolation valves was approximately seven gallons per minute, which was well within the prerequisites of the EGM.

The OPDRV was completed at 0830 CST on March 7, with no complications regarding pool water level control.

## **PREVIOUS OCCURRENCE EVALUATION**

No similar events have been reported by River Bend Station in the last five years.

## **SAFETY SIGNIFICANCE**

The prerequisites of the EGM and applicable station procedures were met prior to the start of the maintenance. The high pressure core spray, low pressure core spray, and "A" residual heat removal systems were designated for emergency water level control. The reactor cavity water level was greater than 23 feet above the RPV flange, and all pool gates were open. Contingency plans for potential leakage paths were in place, and two independent channels of pool water level were in service. No transients in pool water level occurred during the maintenance. Thus, this event was of minimal significance with respect to the health and safety of the public.