



**Entergy**<sup>®</sup>

**Entergy Operations, Inc.**

River Bend Station  
5485 U.S. Highway 61N  
St. Francisville, LA 70775  
Tel 225-381-4177

**Joseph A. Clark**  
Manager-Licensing

September 25, 2015

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

RBG-47615  
RBF1-15-0153

Subject: Reply to a Notice of Violation; EA-15-043  
River Bend Station – Unit 1  
Docket No. 50-458  
License No. NPF-47

Reference: Letter, Marc L. Dapas to Eric W. Olson, "River Bend Station – Final Significance Determination for a White Finding and Notice of Violation; NRC Special Inspection Report 05000458/2015009" dated September 10, 2015

Entergy Operations, Inc. (Entergy) is providing a Reply to a Notice of Violation (NOV), EA-15-043, pursuant to the provisions of 10 CFR 2.201. The NOV resulted from a Special Inspection conducted January 26 through June 29, 2015. Entergy has reviewed Inspection Report (IR) 2015-009 and prepared a reply which is included in Attachment 1 to this letter.

Commitments in this letter are summarized in Attachment 2.

Should you have any questions regarding this reply, please contact me at (225) 381-4177.

JAC/krh

Attachments:

- 1) Reply to a Notice of Violation: EA-15-043, Inspection Report 05000458/2015009
- 2) List of Commitments

LEO1  
RGNIV

Reply to Notice of Violation: EA-15-043  
RBG-47615  
Page 2 of 2

cc: Marc L. Dapas  
Regional Administrator  
U.S. Nuclear Regulatory Commission  
Region IV  
1600 E. Lamar Blvd.  
Arlington, TX 76011-4511

NRC Resident Inspector  
PO Box 1050  
St. Francisville, LA 70775

Ms. Tracie Lowrey  
Public Utility Commission of Texas  
1701 N. Congress Ave.  
Austin, TX 78711-3326

Mr. Alan Wang, Project Manager  
U.S. Nuclear Regulatory Commission  
MS O-8B1  
11555 Rockville Pike  
Rockville, MD 20852-2738

Attachment 1

RBG-47615

Reply to a Notice of Violation: EA-15-043,  
Inspection Report 05000458/2015009

## Attachment 1

### Reply to a Notice of Violation: EA-15-043, Inspection Report 05000458/2015009

#### **Statement of Violation**

10 CFR Part 55.46(c)(1), "Plant-Referenced Simulators," requires, in part, that a simulator "...must demonstrate expected plant response to operator input and to normal, transient, and accident conditions to which the simulator has been designed to respond."

Contrary to the above, as of January 30, 2015, the simulator failed to demonstrate expected plant response to operator input and to normal, transient, and accident conditions to which the simulator has been designed to respond. Specifically, the River Bend Station's simulator failed to correctly model leakage flow rates across the feedwater regulating valves; failed to provide the correct alarm response for a loss of a reactor protection system motor generator set; and failed to correctly model the behavior of the startup feedwater regulating valve controller. These simulator modeling issues led to negative training of operators. This subsequently complicated the operators' response to a reactor scram in the actual plant on December 25, 2014.

This violation is associated with a White Significance Determination Process finding.

#### **Reasons for the violation**

Entergy agrees that a performance deficiency exists and has performed a Root Cause Evaluation. The Root Cause shows that there are programmatic gaps in the plant processes to identify and communicate differences between the simulator and the operating characteristics of the reference plant. The root cause resulted from plant equipment issues not being elevated for incorporation into the simulator model. In addition, there was no process for capturing post transient alarms and submitting them to training for evaluation. This is supported by:

- Failing to recognize, through the Corrective Action Process (CAP), the impact on operator's ability to regulate water level
- No process exists for capturing alarms received during a plant transient and submitting to training for evaluation
- Conditions were not identified as an Operator workaround or burden
- The checklist in Training Policy 97-02, "Training Simulator Configuration Control," does not contain a review of the Operator workaround or burden list for impact on Training.
- Removal of ten demineralizers from service resulted in the inability to obtain post SCRAM feedwater level trends which are used during Post Event Simulator Testing (PEST) to validate simulator configuration

#### **Corrective steps that have been taken and the results achieved**

1. Simulator Deficiency Requests were completed to correct the following simulator fidelity issues:

- Feedwater Regulating Valves modeled with no leakage
  - Startup Feedwater Regulating valve does not operate the same as it does in the plant (plant has up to an 8-minute delay in opening)
  - High drywell pressure and Reactor Pressure Vessel (RPV) High pressure alarms do not actuate on a loss of RPS bus
2. Training was developed and administered to the operating crews on the changes implemented in the Simulator.
  3. GOP-0005, "Power Maneuvering" was revised to include actions to freeze Emergency Response Information System (ERIS) / Safety Parameter Display System (SPDS) Transient Recording and Analysis (TRA) data and collect alarm typer data for Simulator evaluation following a transient.
  4. Defined "transient" to set boundaries for evaluation to support revision to GOP-0005, "Power Maneuvering".
  5. Revised OSP-0022, "Operations General Administrative Guidelines" to include guidelines for:
    - a. Capturing post transient alarms
    - b. Submitting post transient alarms to training for evaluation
    - c. Submitting all EN-OP-117, "Operations Assessment Resources" transient snapshot assessments to Training for evaluation
  6. Revised Training Policy 97-02, "Training Simulator Configuration Control", to include a review of the Operations Aggregate Index.
  7. Reviewed Surveillance Test Procedures (STPs) performed during Simulator Annual Operating test for completeness. Based on the review, the following STPs were added:
    - a. STP-601-6301, "RWCU Valve Operability"
    - b. STP-000-6304, "Auxiliary Building and Annulus Pressure Control Quarterly Operability"

Results were evaluated and approved by the Simulator Review Board.

8. Performed a snapshot assessment of equipment issues that could lead to Simulator differences and result in potential negative training. Assessment included licensed operator interviews and a review of the Operation's Aggregate Index.
9. Reinforced the requirements for Operation's Senior Reactor Operators to initiate a Training Evaluation Action Request (TEAR) for simulator support to run the transient on the Simulator to evaluate accuracy against real plant response per EN-OP-117, "Operations Assessment Resources."

The results of these actions are:

- Simulator correctly models plant for identified issues,
- Operators are adequately trained on the changes made to the Simulator, and

- Process is in place for operators to capture transient information for training evaluation.

**Corrective steps that will be taken**

1. Develop case study on the lessons learned for not identifying the Feedwater Regulating Valve seat leakage as an operator workaround. Case study will be presented to the Condition Review Group (CRG) members, all Operations Instructors, and at Supervisor training. Corrective action is due 9/28/15.

**Date when full compliance will be achieved**

River Bend is currently in full compliance with the regulations based on the completed corrective actions discussed above. Additional actions are being taken to address the Extent of Condition. These actions will be completed by September 28, 2015.

Attachment 2

RBG-47615

List of Commitments

List of Commitments

Commitment	Type (Check one)		Scheduled Completion Date (if required)
	One-Time Action	Continuing Compliance	
Develop case study on the lessons learned for not identifying the Feedwater Regulating Valve seat leakage as an operator workaround. Case study will be presented to the Condition Review Group (CRG) members, all Operations Instructors, and at Supervisor training.	X		9/28/15