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U. S. Nuclear Regulatory Commission
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RBG-47428
RBF1-14-0014

Subject: Reply to Notice of Violation: EA-13-110
River Bend Station – Unit 1
Docket No. 50-458
License No. NPF-47

Reference: Letter, Geoffrey B. Miller to Eric W. Olson, "River Bend Station – NRC Triennial Fire Protection Inspection Report 05000458/2013007 and Notice of Violation," dated January 2, 2014 (ML14002A437)

Entergy Operations, Inc. (Entergy) is providing a Reply to Notice of Violation (NOV), EA 13-110, pursuant to the provisions of 10 CFR 2.201. The NOV resulted from a Triennial Fire Protection inspection conducted April 15 through December 30, 2013. Entergy has reviewed Inspection Report (IR) 2013-007 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 Notice of Violation: EA-13-110 Inspection Report 05000458/2013007-01
2) List of Commitments

A006
IE01
NRR

cc: U.S. Nuclear Regulatory Commission
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Attachment 1

RBG-47428

Reply to Notice of Violation: EA-13-110
Inspection Report 0500458/2013007-01

Attachment 1

Reply to Notice of Violation: EA-13-110
Inspection Report 05000458/2013007-01

Statement of Violation

Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix B, Criterion XVI, states that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and non-conformances are promptly identified and corrected.

Contrary to the above, from November 2, 2012, to December 30, 2013, the licensee failed to promptly identify and correct conditions adverse to quality. Specifically, the licensee failed to implement all of the required corrective actions for multiple spurious operations concerns prior to November 2, 2012, which marked the expiration of enforcement discretion for multiple spurious operations contained in Enforcement Guidance Memorandum 09-002.

The violation involves three examples of multiple spurious operations concerns where corrective actions were not completed prior to the end of the enforcement discretion period, November 2, 2012. The examples are:

Example 1: *Plant-Specific Scenario Diverting the Suppression Pool Inventory to the Upper Fuel Pool*

Example 2: *NEI 00-01, Revision 2, Scenario 2AB – Spurious Opening of Both Reactor Core Isolation Cooling Test Return to Condensate Storage Tank Valves with Suction from the Suppression Pool Transferring Inventory to the Condensate Storage Tank*

Example 3: *NEI 00-01, Revision 2, Scenario 2L – Spurious Residual Heat Removal Minimum Flow Valve Failure to Open with Failure to Establish a Discharge Path*

This violation is associated with a Green significance determination process finding.

Reason for the violation, or, if contested, the basis for disputing the violation or severity level

Entergy agrees that a performance deficiency exists. However, Entergy respectfully requests that the NRC consider the information provided below and re-characterize the cited violation, as appropriate. The information will show the following:

1) Appendix B applies to safety-related structures, systems, and components (SSCs). Fire Protection evaluations do not meet the definition of safety related.

2) The performance deficiency was not a lack of concern for timeliness but rather an error resulting in an incomplete evaluation.

Enforcement Discussion:

Enforcement Guidance Memorandum (EGM) EGM-09-002 was issued in May 2009 to describe the conditions limiting enforcement discretion during the resolution of fire protection concerns involving multiple spurious operations (MSO). The EGM establishes a period of enforcement discretion for six months following the issuance of RG 1.189, Revision 2, for licensees to identify non-compliances related to multiple fire induced circuit faults, incorporate the non-compliances into their corrective action program, and implement compensatory measures for the non-compliances. The EGM also allows a period of three years following the issuance of RG 1.189, Revision 2, for licensees to complete the corrective actions associated with non-compliance multiple fire-induced circuit faults. Although EGMs may be reviewed by licensees, they are simply internal guidance for the NRC and are not considered regulatory requirements.

RG 1.189 formalized the "requirements" for addressing multiple fire induced circuit failures, or MSOs and multiple concurrent hot shorts. RG 1.189 endorsed portions of NEI 00-01, Revision 2, as an acceptable approach to address these issues. As stated on page 1 of RG 1.189, "Regulatory Guides are not substitutes for regulations, and compliance with them is not required."

River Bend and the industry understand that these documents, in some cases, refer to non-compliances with explicit regulatory requirements or with the site's current Licensing Basis. The vast majority of MSO scenarios involve malfunction of non-credited trains, and thus were never subject to an explicit regulatory requirement. Site actions to address MSOs on these systems, structures and components have always constituted a voluntary industry initiative. Plants placed these items into their corrective action programs to ensure enforcement discretion would be available if needed, however, once thoroughly analyzed, the determination was typically made that these scenarios were beyond the regulation and the current Licensing Basis.

River Bend, in good faith, performed an analysis of multiple spurious operations in accordance with NEI 00-01, Revision 2. An Expert Panel was established to review the generic list of multiple spurious operations. The Panel identified several scenarios that required detailed circuit analyses to resolve. A circuit analysis was performed and a final report was issued in August, 2010, recommending additional actions for scenarios that could not be resolved by circuit analysis. A second detailed report was issued in July, 2011 also recommending additional actions for scenarios that could not be resolved by circuit analysis.

As identified in a self-assessment, some of these recommendations were not fully reconciled. The detailed evaluations were completed; however, there were recommendations that required additional evaluation. These were entered into the corrective action program. As discussed above, the scenarios described in this violation did not constitute non-compliances and no additional actions were necessary for compliance. The performance deficiency is the error that was made in the evaluation itself (i.e. overlooking the evaluation of the scenario described in example 1). Examples 2 and 3 were evaluated by November 2, 2012 and additional actions taken with these scenarios were found to be prudent and not required for compliance. This performance deficiency is similar to a 50.59 evaluation that was analyzed with no net effect. The evaluation of the three scenarios in this cited violation did not identify any non-compliances or required actions although additional voluntary actions to provide additional margin were identified.

NRC EGM 09-002 states: "Non-compliances identified after this 6 month period will be dispositioned in accordance with the Enforcement Policy." The evaluation of the scenarios cited in this violation did not result in non-compliances and should not be treated as non-compliances using the Enforcement Policy.

A specific regulatory requirement or mandate for licensees to analyze the spurious operation of non-credited trains of equipment has not been issued to date. Appendix R (and its equivalent BTP 9.5-1 language for post 1979 plants), requires that one train of systems, structures, or components (SSCs) necessary for hot shutdown be free of fire damage. No criterion is specified regarding how to address malfunctions of non-credited trains of equipment. In the cited examples, component failures, in all affected fire areas, were associated with non-credited train components and do not adversely impact the ability of the plant to shut down. Based on this information, River Bend does not believe that this constitutes a violation of 10 CFR 50, Appendix B.

10 CFR 50, Appendix B applies to safety-related actions and analyses. 10 CFR 50.2 defines safety-related as "structures, systems, and components that are relied upon to remain functional during and following design basis events to assure 1) integrity of the reactor coolant pressure boundary, 2) capability to shut down the reactor and maintain it in a safe shutdown condition, or 3) capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures..." The proposed violation applies to fire protection evaluations which do not meet the definition of a safety-related analysis.

Manual Chapter 0612 defines a violation as: "*The failure to comply with a legally binding regulatory requirement, such as a statute, regulation, order, license condition, technical specification.*" As described above, a legally binding regulatory requirement has not been mandated to nuclear plants for MSO. Appendix R requires one train of SSCs necessary for hot shutdown to be free of fire damage. No criterion is specified regarding how to address malfunctions of non-credited trains of equipment. In addition, River Bend is in compliance with the Code of Federal Regulations and their current Licensing Basis.

Corrective steps that have been taken to restore compliance and the results achieved

Example 1 (LPCI-A-2 and LPCI-B-2: Flow Diversion to Containment)
RHR A and RHR B flow diversion to containment was addressed in Enercon Report ENTGRB083, Multiple Spurious Operations Circuit Analysis and Scenario Disposition and EPM Report P2083-07-001, Regulatory Guide 1.189 Support Project. Component failures, in all affected fire areas, were associated with non-credited train components and will not adversely impact the ability of the plant to shut down.

The RHR A Train, including E12*MOVF037A, may be controlled independent of the Main Control Room from the Division I Remote Shutdown Panel. River Bend has calculated that 6.353 inches of suppression pool inventory could be transferred to the upper pool in these scenarios prior to overflow of the upper pool back to the suppression pool. All ECCS systems would continue to have adequate net positive suction head, even with this suppression pool level reduction. Consequently, there is no adverse impact to suppression pool inventory as a result of this scenario. There is no adverse impact to post fire safe shutdown associated with these flow diversion scenarios; consequently, there is no non-conformance. River Bend design is adequate to mitigate adverse impact on safe shutdown from these scenarios.

Example 2 (RCIC-2: RCIC Flow Diversion from Suppression Pool to Condensate Storage Tank)
RCIC flow diversion from the suppression pool to the CST was addressed in Enercon Report ENTGRB083, Multiple Spurious Operations Circuit Analysis and Scenario Disposition and EPM Report P2083-07-001, Regulatory Guide 1.189 Support Project. Component failures, in all affected fire areas, were associated with non-credited train components and will not adversely impact the ability of the plant to shut down.

With the exception of Fire Area C-16, Remote Shutdown Room, RCIC operation can be controlled from the Main Control Room by E51*MOVF063, Inboard Steam Isolation Valve. Fire Area C-16 credits Automatic Depressurization and RHR-C for RPV makeup. Automatic Depressurization will render RCIC non-functional to mitigate this scenario. River Bend has calculated that the percentage of suction from the CST versus the Suppression Pool is 100% until CST level lowers below the CST RCIC suction nozzle or a valve is closed to isolate the CST suction path. In this scenario, CST inventory would be circulated from and back to the CST. There will be no suppression inventory loss. This affords ample time for operators to identify this scenario and take action to secure RCIC and/or close at least one of the two series RCIC Test Return Valves to CST. The River Bend configuration and credited shutdown methodologies preclude adverse effects on post fire safe shutdown by this scenario. There is no adverse impact to post fire safe shutdown associated with this flow diversion scenario; consequently, there is no non-conformance.

Example 3 (RHR-A/B/C-3: Spurious RHR Operation with No Flow Path)
RHR A/B/C spurious operation with no flow path was addressed in Enercon Report ENTGRB083, Multiple Spurious Operations Circuit Analysis and Scenario Disposition and EPM Report P2083-07-001, Regulatory Guide 1.189 Support Project. Component failures, in all affected fire areas, were associated with non-credited train components and will not adversely impact the ability of the plant to shut down. River Bend has calculated that RHR pumps can operate with no discharge flow path for 21.7 minutes prior to exceeding pump maximum design temperature. This is ample time for operators to detect the occurrence of these scenarios and take action to mitigate adverse impact on post fire safe shutdown.

Corrective steps that will be taken

Example 1: Although not required to preclude adverse consequences caused by these scenarios, River Bend Station is reviewing Abnormal Operating Procedures to ensure adequate prompting is provided to assist operators in recognizing these scenarios and recommending actions to close E12*MOVF037A/B or secure the spuriously operating RHR Pump A or B. This action will be completed by June 27, 2014.

Example 2: Although not required to preclude adverse consequences caused by this scenario, River Bend Station is reviewing Abnormal Operating Procedures to ensure adequate prompting is provided to assist operators in recognizing this scenario and recommending actions to secure RCIC and/or isolate the test return flow path to the CST. This action will be completed by June 27, 2014.

Example 3: River Bend Station is reviewing Abnormal Operating Procedures to ensure adequate prompting is provided to assist operators in recognizing these scenarios and recommending actions to secure spuriously operating RHR pumps and/or open the respective minimum flow valve. This action will be completed by June 27, 2014.

Date when full compliance will be achieved

As discussed above, we believe that we are in full compliance with the regulations. Enhancement actions are being taken to address the violation and will be completed by June 27, 2014.

Attachment 1

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List of Commitments

List of Commitments

Commitment	Type (Check one)		Scheduled Completion Date (if required)
	One-Time Action	Continuing Compliance	
Although not required to preclude adverse consequences caused by these scenarios, River Bend Station is reviewing Abnormal Operating Procedures to ensure adequate prompting is provided to assist operators in recognizing these scenarios and recommending actions to close E12*MOVF037A/B or secure the spuriously operating RHR Pump A or B.	X		June 27, 2014
Although not required to preclude adverse consequences caused by this scenario, River Bend Station is reviewing Abnormal Operating Procedures to ensure adequate prompting is provided to assist operators in recognizing this scenario and recommending actions to secure RCIC and/or isolate the test return flow path to the CST.	X		June 27, 2014
River Bend Station is reviewing Abnormal Operating Procedures to ensure adequate prompting is provided to assist operators in recognizing these scenarios and recommending actions to secure spuriously operating RHR pumps and/or open the respective minimum flow valve.	X		June 27, 2014