River Bend 1
2Q/2009 Plant Inspection Findings

Initiating Events

Significance: G Sep 27, 2008
Identified By: Self-Revealing
Item Type: FIN Finding
Turbine Building Siding Failure Below Design Specifications
A self-revealing finding was identified for wind induced turbine building siding failure that occurred significantly below design specified stress levels as a result of design and installation deficiencies. This resulted in a forced outage to repair transformer damage and to repair the turbine building siding. The licensee missed prior opportunities to identify turbine building siding design and installation deficiencies following damaging wind events in 1992 and 2005. The licensee entered this issue into the corrective action program as Condition Report CR-RBS-2008-5176.

This finding is more than minor because it is associated with the protection against external factors attribute (wind and grid stability) of the initiating events cornerstone and affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors evaluated the significance of this finding using Manual Chapter 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” and determined it to be of very low safety significance because the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available.

Inspection Report# : 2008004 *(pdf)*

Mitigating Systems

Significance: G May 15, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Operability Determinations for a Degraded Diesel Exhaust Pipe
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures and Drawings” for twice failing to perform an adequate operability evaluation on the Division II diesel generator after the number 8 cylinder exhaust pipe cracked and later when two of four exhaust flange bolts failed.

The finding is more than minor because it affects the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems responding to initiating events to prevent undesirable consequences. The team determined that a Phase 3 significance determination was required because the finding screened as potentially risk significant due to potential loss of safety function of a single train. Region IV senior risk analysts performed a Phase 3 significance determination and determined that the issue represents a finding of very low safety significance (Green). This violation has a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program because the licensee did not thoroughly evaluate problems such that the resolutions address causes and extent of conditions, as necessary. Specifically the licensee failed to properly prioritize and evaluate for operability a degraded Division II diesel generator Number 8 cylinder exhaust pipe and flange [P.1 (c)].
Inspection Report# : 2009008 *(pdf)*

Significance: G Mar 31, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Risk Assessment While the Control Building Chilled Water System was Removed from Service
The inspectors identified a Green noncited violation of 10 CFR 50.65(a)(4) involving the failure of operators to perform an adequate risk assessment while the Division 1 control building chilled water was unavailable. Specifically, the inspectors identified that licensee personnel non-conservatively evaluated the on-line risk as Green instead of Yellow. This resulted in an unrecognized increase in the level of risk as determined by Entergy's probabilistic safety analysis evaluation. The licensee entered this issue into their corrective action program as Condition Report CR-RBS-2009-0862.

Using Inspection Manual Chapter 0612, Appendix E, Section 3, Item 7(e), the finding is more than minor because the licensee's risk assessment had errors and incorrect assumptions regarding the unavailability of mitigating systems that put the plant in a higher risk category. Using Inspection Manual Chapter 0609, "Significance Determination Process," Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," the finding is determined to have very low safety significance because the incremental core damage probability deficit for the affected time period is less than 1.0E-6. This finding has a crosscutting aspect in the area of human performance component for work practices because Entergy personnel did not effectively follow procedures [H.4(b)].
Inspection Report# : 2009002 *(pdf)*

Significance: G Mar 30, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to promptly correct a condition adverse to quality
The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to implement required actions to ensure that conditions were promptly corrected. Specifically, on February 10, 2009, during a review of corrective action documents, the inspectors noted that corrective actions for condition report CR-RBS-2007-03034 were inadequate to correct a condition in which an instrument was not treated as measuring and test equipment. The team noted that corrective action was proposed, but not implemented, and the condition report was closed. The condition which prompted the condition report still existed at the time of the inspection. The licensee entered this issue into corrective action program as condition report CR-RBS-2009-00747.

The failure to implement timely corrective action is a performance deficiency. The finding is greater than minor because if left uncorrected, the performance deficiency would have the potential to lead to a more significant safety concern, such as an improperly calibrated main steam line monitor. The performance deficiency affected the barrier integrity cornerstone in that the proper calibration of the main steam line monitors is necessary to ensure proper isolation of containment in the event of fuel damage. Using Phase 1 worksheet from Manual Chapter 0609, "Significance Determination Process," this finding was determined to have very low safety significance because it did not represent a degradation of the radiological barrier function provided for the control room, auxiliary building, spent fuel pool, or standby gas treatment system; did not represent an actual open pathway in the physical integrity of the reactor containment and heat removal components, and did not involve an actual reduction in function of hydrogen ignitors in the reactor containment. This finding has a crosscutting aspect in the area of human performance associated with the decision making component because the licensee did not use conservative assumptions to demonstrate that the decision to close the condition report with no further action was appropriate (H1.b).
Inspection Report# : 2009006 *(pdf)*

Significance: G Sep 27, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedure for Staging the Station Blackout Diesel Generator during Severe Weather
The inspectors identified a noncited violation of Technical Specification 5.4.1.a involving the failure to have an adequate procedure to ensure the availability of on site emergency ac power sources following the four-hour coping period of a postulated station blackout. Specifically, station procedures did not ensure that the station blackout diesel

generator would be reliably deployed to fulfill its intended function during sustained high winds. The licensee entered this issue into their corrective action program as Condition Report CR-RBS-2008-5050.

This finding is more than minor because it is associated with the protection against external factors attribute (wind and grid stability) of the mitigating systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors evaluated the significance of this finding using Manual Chapter 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” and determined it to be of very low safety significance because it did not result in an actual loss of safety function and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

Inspection Report# : 2008004 *(pdf)*

Significance: G Sep 27, 2008
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadequate Corrective Actions Results in Multiple Failures of Standby Service Water Switchgear Room Ventilation Fans
A self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” was identified for the licensee’s failure to take adequate corrective actions in response to a condition adverse to quality resulting in repetitive failures of the standby service water switchgear room ventilation fans. Following failure of the switchgear fans in July 2008, the licensee found that inappropriate flow switch settings on the fans had been identified in a condition report in October 1999, but no actions had been taken to correct the condition. Subsequently, more failures of the standby service water switchgear room ventilation fans occurred, including nineteen in the past three and one half years, many of which were attributed to flow switch issues. The licensee entered this issue into their corrective action program as Condition Report CR-RBS-2008-5761.

The finding was more than minor because it affected the equipment performance attribute of the mitigating systems cornerstone, and it directly affected the cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to preclude undesirable consequences. Using Manual Chapter 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” the finding was determined to have very low safety significance because the condition did not result in an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time. This finding has a crosscutting aspect in the area of human performance associated with resources in that the licensee failed to maintain long term plant safety by minimization of long standing equipment issues [H.2(a)].

Inspection Report# : 2008004 *(pdf)*

Significance: G Sep 27, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Risk Assessment for Transformer Yard Maintenance While Shut Down
The inspectors identified a noncited violation of 10 CFR 50.65(a)(4) involving the licensee’s failure to assess and manage the increase in risk that may result from proposed maintenance activities. Specifically, while conducting maintenance in the transformer yard during severe weather with high pressure core spray inoperable, the licensee did not assess the affects on the shutdown risk. The licensee entered this issue into their corrective action program as Condition Report CR-RBS-2008-05383.

The inspectors determined this finding was more than minor since it was similar to Manual Chapter 0612, Appendix E, Example 7.e, and since it caused the licensee’s risk model to change from a Green to Yellow risk window. In accordance with NRC Inspection Manual Chapter 0609, Appendix K, “Maintenance Risk Assessment and Risk Management,” the inspectors requested that a senior reactor analyst evaluate the risk of this condition. The analyst determined that this finding was of very low risk significance because the associated risk deficit was less than 1.0E-6.

Inspection Report# : 2008004 *(pdf)*

Significance: G Aug 26, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Eight Examples of a Failure to Meet 10 CFR Part 50, Appendix B, "Design Control"
The team identified a finding of very low safety significance involving a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” with eight examples.

• Example 1: Non-conservative inputs and assumptions used without adequate technical justification to evaluate the minimum terminal voltage and actuator output torque for safety-related motor operated valves. After identification, the licensee entered the issue into the corrective action program as Condition Report CR-RBS-2008-03339.

• Example 2: Failure to perform a conservative analysis to ensure that Technical Specification Setpoints were adequate. After identification, the licensee entered the issue into the corrective action program as Condition Report CR-RBS-2008-03911.

• Example 3: Non-conservative inputs and methodologies used in calculating control circuit voltages to safety-related 480V motor operated valves motor-operated valve and motors that would be required to operate for mitigation of design bases events. After identification, the licensee entered the issue into the corrective action program as Condition Report CR-RBS-2008-03858.

• Example 4: Failure to evaluate E12-MOV-F042A, residual heat removal injection valve, and E12-MOV-F064A, residual heat removal minimum flow valve, to verify adequate voltage would be available to operate the associated 120VAC control circuit devices. After identification, the licensee entered the issue into the corrective action program as Condition Report CR-RBS-2008-03641

• Example 5: Inadequate design basis documentation for hydrogen concentration control in the Division I and II Battery Rooms in the control building. After identification, the licensee entered the issue into the corrective action program as Condition Reports CR-RBS-2008-02566 and CR-RBS-2008-03403.

• Example 6: Failure to ensure design basis information for safety related 125VDC batteries was controlled and correctly translated into procedures and instructions. After identification, the licensee entered the issue into the corrective action program as Condition Report CR-RBS-2008-03659.

• Example 7: Failure to maintain adequate design basis calculations for ultimate heat sink loading. After identification, the licensee entered the issue into the corrective action program as Condition Report CR-RBS-2008-3712.

• Example 8: Failure to account for the technical specification allowed emergency diesel generator frequency variation in the diesel loading calculation. After identification, the licensee entered the issue into the corrective action program as Condition Report CR-RBS-2008-03556.

The examples associated with this finding were more than minor per Manual Chapter 612, Appendix E, Appendix E, “Examples of Minor Issues,” Example 3j, in that each example resulted in a condition where there was reasonable doubt on the operability of a system or component. The finding was associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Traditional enforcement does not apply because the issue did not have any actual safety consequences or potential for impacting the NRC’s regulatory function, and was not the result of any willful violation of NRC requirements. In accordance with Inspection Manual Chapter 0609, Attachment 4, “Phase 1 – Initial Screening and Characterization of Findings,” a Phase 1 screening was performed and determined each example was of very low safety significance (Green) because it was a design or qualification deficiency confirmed not to result in a loss of operability or functionality.

Inspection Report# : 2008006 *(pdf)*

Significance: G Aug 26, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Recalculate Suppression Pool Peak Temperature Rseponse
The team identified a finding of very low safety significance involving a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," in that, design control measures for verifying the adequacy of design were not implemented. Specifically, the licensee did not recalculate suppression pool peak temperature response when a more severe single failure condition was identified. In response, the licensee entered this issue in the corrective action program as Condition Report CR-RBS-2008-03661 and determined that suppression pool peak temperature response was acceptable.

The finding was more than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Traditional enforcement does not apply because the issue did not have any actual safety consequences or potential for impacting the NRC's regulatory function, and was not the result of any willful violation of NRC requirements. In accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," a Phase 1 screening was performed and determined the finding was of very low safety significance (Green) because it was a design or qualification deficiency confirmed not to result in a loss of operability or functionality of the suppression pool. The finding had a cross-cutting aspect in the area of problem identification and resolution because the licensee initiated a corrective action program action to re-evaluate long-term suppression pool peak temperature performance but closed the action without its completion [P.1 (d)].

Inspection Report# : 2008006 *(pdf)*

Significance: G Aug 26, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Testing Programs for 4-kV Circuit Breakers, Class 1E Molded Case Circuit Breakers, and the Emergency Diesel Generators
The team identified a finding of very low safety significance involving a noncited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," with three examples. Specifically, the team identified that the licensee failed to develop and implement adequate testing programs for 4-kV circuit breakers, Class 1E molded-case circuit breakers, and the emergency diesel generators that met design or vendor requirements and recommendations. In response, the licensee entered these examples in the corrective action program as Condition Reports CR RBS-2008-04379, CR-RBS-2008-3634, CR-RBS-2008-3676 and CR-RBS-2008-3701 and determined there was no loss of safety function for the affected components.

The examples associated with this finding were more than minor because they were associated with the equipment control attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Traditional enforcement does not apply because the issue did not have any actual safety consequences or potential for impacting the NRC's regulatory function, and was not the result of any willful violation of NRC requirements. In accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," a Phase 1 screening was performed and determined each example was of very low safety significance (Green) because it did not represent a loss of system safety function, did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time, did not represent an actual loss of one or more risk-significant non-Technical Specification trains of equipment for greater than 24 hours, and did not screen as potentially risk-significant due to seismic, flooding, or severe weather.

Inspection Report# : 2008006 *(pdf)*

Significance: G Aug 26, 2008

Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Implementation of Temporary Installation Procedure
The team identified a finding of very low safety significance involving a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for five examples of failure to follow the requirements of ADM-0073 “Temporary Installation Guidelines" during the installation of modifications to the plant. Specifically, four modifications were installed in the plant that did not meet the criteria of a temporary installation and one was not removed when no longer needed, as required by the procedure. After identification, the licensee entered the issue into the corrective action program as CR-RBS-2008-3410.

Although the team considered each of the above examples minor in significance, the team determined that this finding, which was associated with design control attribute of the Mitigating Systems cornerstone, was more than minor per Manual Chapter 612, Appendix E, “Examples of Minor Issues,” Example 4a. The finding involved multiple examples of failure to follow licensee procedural requirements and if left uncorrected it could result in design modifications to the plant that were not properly evaluated, controlled, documented and installed. Traditional enforcement does not apply because the issue did not have any actual safety consequences or potential for impacting the NRC’s regulatory function, and was not the result of any willful violation of NRC requirements. In accordance with Inspection Manual Chapter 0609, Attachment 4, “Phase 1 – Initial Screening and Characterization of Findings,” a Phase 1 screening was performed and determined the finding was of very low safety significance (Green) because the condition did not represent a loss of system safety function, did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time, did not represent an actual loss of one or more risk-significant non-Technical Specification trains of equipment for greater than 24 hours, and did not screen as potentially risk-significant due to seismic, flooding, or severe weather. The finding had a crosscutting aspect associated with resources in the human performance area because the licensee failed to ensure that personnel, equipment, procedures, and other resources were available and adequate to assure nuclear safety. Specifically, those necessary for maintaining long term plant safety by maintenance of design margins, minimization of long-standing equipment issues, minimizing preventative maintenance deferrals, and ensuring maintenance and engineering backlogs which were low enough to support safety [H.2 (a)].

Inspection Report# : 2008006 *(pdf)*

Significance: G Aug 26, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Implementation of Operability Determination Procedure
The team identified a finding of very low safety significance involving a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to follow procedures to evaluate conditions adverse to quality for impacts on the operability of safety-related equipment. Specifically, the licensee did not assess the impact on operability of previous steam leaks and motor-stall events on the corrosion of magnesium-rotors in safety-related motor-operated valves. The licensee entered this issue into the corrective action program as Condition Reports CR-RBS-2008-3713 and CR-RBS-2008-3766.

The finding was more than minor because it is associated with the equipment performance attribute of the Mitigating Systems cornerstone objective of ensuring the availability, reliability, and capability of safety-related motor-operated valves to respond to initiating events to prevent undesirable consequences. Traditional enforcement does not apply because the issue did not have any actual safety consequences or potential for impacting the NRC’s regulatory function, and was not the result of any willful violation of NRC requirements. In accordance with Inspection Manual Chapter 0609, Attachment 4, “Phase 1 – Initial Screening and Characterization of Findings,” a Phase 1 screening was performed and determined the finding was of very low safety significance (Green) because the condition did not represent a loss of system safety function, did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time, did not represent an actual loss of one or more risk-significant non-Technical Specification trains of equipment for greater than 24 hours, and did not screen as potentially risk-significant due to seismic, flooding, or severe weather. The cause of the finding had crosscutting aspects associated with the corrective action program in the problem identification and resolution area because the licensee did not thoroughly evaluate the problems with magnesium-rotor corrosion including the extent of the condition and

operability impact [P.1(c)].
Inspection Report# : 2008006 *(pdf)*

Barrier Integrity

Significance: G Aug 26, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate/Untimely Corrective Action for Failure of Magnesium-Rotor Motor-Operated Valves
The team identified a finding of very low safety significance involving a noncited violation of 10 CFR Part 50 Appendix B, Criterion XVI, "Corrective Action," for failure to promptly identify magnesium-rotor motor-operated valve degradation. Specifically, the licensee did not identify magnesium-rotor degradation in May 2007 after failure of Valve B21-MOV-FO65A, “Reactor Inlet Heater ‘A’ Outboard Motor Operated Isolation Valve,” until after failure of Valve B21-MOV-FO98C, “Main Steam Shutoff Valve,” in September 2007. The licensee entered this issue into the corrective action program as Condition Reports CR-RBS-2008-3713 and CR-RBS-2008-3766.

This finding was more than minor because Valve B21-MOV-FO98C was associated with the Barrier Integrity Cornerstone and affected the cornerstone objective of providing reasonable assurance that the physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Traditional enforcement does not apply because the issue did not have any actual safety consequences or potential for impacting the NRC’s regulatory function, and was not the result of any willful violation of NRC requirements. Inspection Manual chapter 0609 Appendix H, "Containment Integrity Significance Determination Process," Table 4.1, indicated that the Main Steam Shutoff Valves do not impact large early release frequency. Based on the results of the Appendix H analysis, the finding was determined to have very low safety significance. This finding had cross-cutting aspects associated with decision-making in the human performance area in that the licensee did not use conservative assumptions in decision-making regarding the likelihood of magnesium-rotor degradation in motor-operated valves [H.1 (b)].

Inspection Report# : 2008006 *(pdf)*

Emergency Preparedness

Significance: G Jun 30, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify and Formally Critique an Emergency Plan Weakness
The inspectors identified a violation of 10 CFR 50.47(b)(14) for failure to identify and critique a nonrisk significant planning standard weakness demonstrated during a site emergency preparedness drill. Specifically, the licensee demonstrated a weakness in controlling radiological exposures for emergency workers during an emergency, without key emergency response organization decision maker consideration or input, when simulated emergency workers were left in containment during changing radiological conditions. The licensee entered this issue into their corrective action program as Condition Report CR-RBS-2009-02458.

This finding is more than minor because it is associated with the emergency response organization performance attribute of the Emergency Preparedness Cornerstone which ensures the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. The inspectors evaluated the significance of this finding using Sheet 1, “Failure to Comply,” of Inspection Manual Chapter 0609, Appendix B, “Emergency Preparedness Significance Determination Process,” and determined it to be of very low safety significance (Green) because the finding was a failure to comply with the requirements of 10 CFR 50.47(b)

(14), the finding was associated with an emergency preparedness planning standard, the associated planning standard was not risk significant as defined by Manual Chapter 0609, Appendix B, and the finding was not a functional failure of the planning standard function. The inspectors determined that the finding has a crosscutting aspect in the area of problem identification and resolution because the licensee did not identify issues completely, accurately, and in a timely manner commensurate with their safety significance [P.1(a)].
Inspection Report# : 2009003 *(pdf)*

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the cover letters to security inspection reports may be viewed.

Miscellaneous

Last modified : August 31, 2009