River Bend 1
1Q/2010 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2009
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Main Steam Line Plug Seal Failure Results in Loss of Reactor Cavity Inventory
A self-revealing noncited violation of 10CFR50 Appendix B, Criterion V, “Instructions, Procedures and Drawings,” was identified for the failure to follow the procedure for making a permanent plant modification and provide adequate procedures for installation and use of the main steam line plugs following a main steam line plug design change. This failure resulted in draining approximately 5,000 gallons of water from the upper reactor cavity pool to the drywell and a manual actuation of low pressure coolant injection to restore cavity pool water level. The licensee entered this issue into their corrective action program as Condition Report CR-RBS-2009-4681.

The finding was more than minor in accordance with Inspection Manual Chapter 0612, Appendix B, “Issues Screening,” because the finding affected the initiating events cornerstone attribute of configuration control and the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown operations. The inspectors evaluated the finding in accordance with Inspection Manual Chapter 0609, Appendix G, “Shutdown Operations Significance Determination Process.” The inspectors reviewed Section II.B.(1) of Checklist 7 and determined that the finding required a Phase 2 analysis because the finding involved procedures that affected steam line plug seal configuration and resulted in inventory loss from the upper reactor cavity pool. The senior reactor analyst determined that, because of the special circumstances of this event, the use of a qualitative assessment using Inspection Manual Chapter 0609, Appendix M, was more appropriate than the risk tools provided in Inspection Manual Chapter 0609, Appendix G. This is because the draindown event was self-limiting, such that the inventory excursion could not have drained reactor cavity level below the level of the main steam lines, and that even with the failure of operators to take actions, the core would have remained covered with no challenges to the shutdown cooling system. Therefore, the event in the worst case would have been transparent to the core. Also, the displaced inventory posed no threat to any of the plant's mitigating systems. The inspectors concluded that the finding was of very low safety significance (Green). There is no crosscutting aspect associated with this violation because the finding does not reflect current licensee performance.
Inspection Report# : 2009005 *(pdf)*

Mitigating Systems

Significance: G Mar 31, 2010
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Evaluate a Revised Equipment Tag Out
A self-revealing noncited violation of Technical Specification 5.4.1.a. was identified for defeating the Division I emergency systems automatic start functions caused by the failure to follow a work implementation and closeout procedure when changing the work scope and tag out boundaries for a safety-related maintenance activity. The licensee entered this issue into their corrective action program as Condition Report CR-RBS-2009-06151.

The finding was more than minor because it affected the equipment performance attribute of the mitigating systems cornerstone and affected the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance (Green) because the finding did not represent an actual loss of safety function. This finding has a crosscutting aspect in the area of

human performance, work control because the licensee did not appropriately plan activities by incorporating actions to address operational impact and risk for the work scope changes [H.3(a)].
Inspection Report# : 2010002 *(pdf)*

Significance: G Mar 31, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Verify Control Building Chiller Operability During Low Service Water Temperatures
The inspectors identified a Green noncited violation of Technical Specification 3.7.3 for exceeding the control room air conditioning system thirty day allowed outage time for one inoperable subsystem and the seven day allowed outage time for two inoperable subsystems and failing to enter Modes 3 and 4, as specified. Specifically, during accident conditions the control building chillers were not able to remove the design basis heat load while operating with low standby cooling water temperatures. The licensee entered this issue into their corrective action program as Condition Report CR-RBS-2010-01593, CR-RBS-2010-01817 and CR-RBS-2010-01667.

The performance deficiency was more than minor in accordance with Inspection Manual Chapter 0612, Appendix B, “Issue Disposition Screening,” because the finding was associated with the mitigating systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability of multiple safety-related systems and components to respond to initiating events to prevent undesirable consequences. Using Manual Chapter 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," the inspectors determined that because the finding resulted in an actual loss of safety function of a single train for greater than its technical specification allowed outage time and required a Phase 2 analysis. However, the Phase 2 presolved table and worksheets did not contain appropriate target sets to estimate accurately the risk impact of the finding. Therefore, the senior reactor analyst performed a Phase 3 analysis. The estimated change in core damage frequency was 2.3E-8/yr. Therefore, the inspectors determined the significance of the finding was Green. This finding was not assigned a crosscutting aspect because it does not reflect current licensee performance.
Inspection Report# : 2010002 *(pdf)*

Significance: G Mar 31, 2010
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Adequately Verify a Suitable Replacement Part Essential for Emergency Diesel Generator Operation
A self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified for the failure to adequately verify suitable replacement parts essential to the operation of emergency diesel generator Division I. This resulted in multiple intercooler flange bolts failing from low stress, high cycle fatigue. The licensee entered this issue into their corrective action program as Condition Report CR-RBS-2009-06148.

The finding is also similar to example 3j of Manual Chapter 0612 Appendix E. Specifically, the number of bolting failures placed the emergency diesel generator’s operability in doubt and an engineering analysis had to be performed to prove operability. In accordance with Inspection Manual Chapter 0609, Appendix A, “Significance Determination of Reactor Inspection Findings for At-Power Situations,” the inspectors performed a significant determination process Phase 1 screening and determined that the finding was of very low safety significance (Green) because a licensee analysis concluded that the bolts that were projected to fail during the emergency diesel generator mission time of thirty days would not result in an actual loss of system safety function. The inspectors determined that the finding had a crosscutting aspect in the area of human performance resources in that the licensee failed to ensure that equipment was adequate for maintaining long term plant safety by maintenance of design margins [H.2(a)].
Inspection Report# : 2010002 *(pdf)*

Significance: G Sep 30, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Control Scaffold Construction
The inspectors identified a Green noncited violation of Technical Specification 5.4.1.a for the failure of maintenance

personnel to control scaffold erection per procedure. This failure resulted in the licensee installing 31 scaffolds in safety related areas that required either rework or an engineering evaluation to resolve as built deviations from the minimum seismic separation requirements. As a result, the design function of the safety related equipment was potentially adversely affected. The licensee entered this issue into their corrective action program as Condition Report CR-RBS-2009-3963.

The failure to erect scaffolds in accordance with procedures is a performance deficiency. This finding is more than minor because it is similar to Inspection Manual Chapter 0612, Appendix E, "Examples of Minor Issues," Section 4, Example a, because Entergy had routinely failed to perform the requisite engineering evaluation and because it was associated with the protection against external events 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 in order to prevent undesirable consequences. The finding was determined to be of very low risk significance (Green) because no actual loss of safety function occurred and the finding did not screen as potentially risk significant due to external events. This finding has a crosscutting aspect in the area of human performance, work practices, because the licensee failed to ensure supervisory and management oversight of work activities, including contractors, such that nuclear safety is supported [H.4(c)].
Inspection Report# : 2009004 *(pdf)*

Significance: G Sep 30, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Maintain Reactor Core Isolation Cooling System Seismic Design
The inspectors identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for failure to implement measures to ensure that the seismic design basis for the reactor core isolation cooling turbine governor hydraulic system was correctly translated into the specifications, drawings, procedures, or instructions. This resulted in work to reroute the piping and an engineering evaluation to resolve seismic concerns. The licensee entered this issue into their corrective action program as Condition Report CR RBS 2009 3747.

The failure to implement design control features for the seismic design of the reactor core isolation cooling system is a performance deficiency. This finding was more than minor because it is similar to Inspection Manual Chapter 0612, Appendix E, "Examples of Minor Issues," Section 5, Example a, in that the reactor core isolation cooling turbine was returned to service without the seismic spacing required by the original design or completion of an evaluation for the as left condition. This resulted in rework and additional engineering analysis to correctly resolve the seismic qualification concerns. The performance deficiency also affected the mitigating systems cornerstone attribute of external events and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events in order to prevent undesirable consequences. The inspectors evaluated the finding using Inspection Manual Chapter 0609, Attachment A, "Phase 1 – Initial Screening and Characterization of Findings," for the mitigating systems cornerstone. After answering "no" to all five questions in the mitigating systems cornerstone column of Table 4a, "Characterization Worksheet for Initiating Events, Mitigating Systems, and Barrier Integrity Cornerstones," the inspectors concluded that the finding was of very low safety significance. This finding does not have a crosscutting aspect because the performance deficiency occurred in 1989 and is not reflective of current plant performance.
Inspection Report# : 2009004 *(pdf)*

Significance: G Sep 30, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Ensure Standby Liquid Control System Test Tank Remained Drained
The inspectors identified a Green noncited violation of Technical Specification 5.4.1.a for the failure of operations personnel to provide adequate procedural guidance to preclude water intrusion into the nonseismically qualified standby liquid control system test tank which resulted in the degradation of both trains of the standby liquid control system. The licensee entered this issue into their corrective action program as Condition Report CR RBS 2009 3862.

The failure to provide appropriate procedures to keep the standby liquid control test tank drained is a performance deficiency. The finding is more than minor because it affects the protection against external events attribute of the

mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems responding to initiating events to prevent undesirable consequences. The inspectors determined that the finding was of very low safety significance because the finding was not a design or qualification deficiency, did not represent a loss of a system/train safety function, and did not screen as potentially risk significant due to external events. This finding has a crosscutting aspect in the area of problem identification and resolution's corrective action program because the licensee failed to take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity. Specifically, the licensee failed to address the cause of inadvertent water intrusion into the standby liquid control test tank in a timely manner to prevent the common mode failure of both trains of standby liquid control [P.1(d)].
Inspection Report# : 2009004 *(pdf)*

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)*

Barrier Integrity

Significance: G Sep 30, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Containment Closure Procedure
The inspectors identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure of operations personnel to fully implement a station procedure to control obstructions in primary containment openings in Modes 4 and 5. The failure to follow procedure challenged the licensee's ability to establish containment closure. The licensee entered this issue into their corrective action program as Condition Report CR-RBS-2009-4296.

The failure to implement the containment closure procedure is a performance deficiency. This finding is more than minor because it affected the configuration control attribute of the barrier integrity objective to provide reasonable assurance that the physical design barriers (containment) will protect the public from radionuclide releases. Using Inspection Manual Chapter 0609, Appendix H, "Containment Integrity Significance Determination Process," the finding was assessed as a Type B finding because it is related to a degraded condition that has potentially important implications for the integrity of the containment without affecting the likelihood of core damage and was of very low significance because the licensee did not lose the capability to close containment when planned. The finding has a crosscutting aspect in the area of human performance, work control, because the licensee failed to appropriately coordinate work activities (identifying cables, quick disconnects, removing unidentified cables) to address the operational impact of those work activities on containment operability [H.3(b)].

Inspection Report# : 2009004 *(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

Significance: G Dec 31, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Ensure the Emergency Contact had Knowledge About a Shipment
The inspectors identified a noncited violation of 10 CFR 71.5 and 49 CFR Part 172.604(a) for a failure to ensure that the shift manager, whose phone number was listed as the required 24-hour emergency phone number on shipping documents, was knowledgeable about the radioactive waste shipment that left site on December 16, 2009, and had immediate access to a person who had specific information on the shipment. Specifically, the shift manager was listed as the required 24-hour contact; however, the shift managers (on multiple shifts) were not provided with documentation or information about the shipments that left the site on December 16, 2009. Although the shift manager would have eventually contacted a knowledgeable person, this delay would not have resulted in immediate access to the person with information related to the shipment. The licensee immediately provided the shift manager a copy of the shipping documentation, briefed the shift manager, and entered this issue into their corrective action program as Condition Report CR-RBS-2009-06419.

This performance deficiency was more than minor because it adversely affected the public radiation safety

cornerstone to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain in that the failure to have shipment information immediately available could restrict the actions of fire department and/or rescue personnel responding to an accident. When processed through the Public Radiation Safety Determination Process, the finding was determined to be of very low safety significance because the finding: (1) was associated with radioactive material control, (2) involved the licensee's program for radioactive material transportation, (3) did not cause radiation limits to be exceeded, (4) did not involve a breach of package during transit, (5) did not involve a certificate of compliance finding, (6) did not involve a low level burial ground nonconformance, and (7) did not involve a failure to make notifications. The inspectors determined the finding had a crosscutting aspect in area of resources, associated with documentation, because the licensee's procedures did not provide guidance on informing the control room about shipments and thus, the procedures were not complete, accurate nor up-to-date [H.2 (c)].
Inspection Report# : 2009005 *(pdf)*

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

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