

River Bend 1

3Q/2011 Plant Inspection Findings

Initiating Events

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: FIN Finding

Ineffective Corrective Actions on the Main Steam Equalizing Header Drain Bypass Valve Results in an Unplanned Down Power

The inspectors identified a self-revealing finding involving inadequate corrective actions in response to a failure in the main steam equalizing header drain bypass valve, resulting in a steam leak and an unplanned plant down power. Specifically, plant personnel failed to properly address the dual indication on the bypass valve and fluid flow through the valve caused water to flash to steam accelerating pipe wall erosion and piping failure. The licensee's immediate corrective actions were to identify, secure, and temporarily repair the steam leak. The licensee entered this issue into the licensee's corrective action program as Condition Report CR-RBS-2011-04592.

The finding was more than minor because it was associated with the equipment performance attribute 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 reviewed the finding using Inspection Manual Chapter 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations." Based on the Phase 1 screening of the finding, the inspectors determined that the finding was of very low safety significance (Green) because it was not a loss of coolant accident initiator, did not contribute to both the likelihood of an initiating event and the likelihood that mitigating equipment or functions would not be available, nor increase the likelihood of an external event (seismic, flooding, or severe weather event). The apparent cause of the performance deficiency was that the control room and outage control center personnel presumed that the main control room dual indication for the valve was incorrect because previously valve operation successfully closed the valve. Consequently, this finding has a crosscutting aspect in the area of human performance associated with the decision-making component because station personnel did not use a systematic process to assess the condition of the bypass valve, and failed to verify the validity of the underlying assumptions that were used to justify operation with the valve having dual indications [H.1(a)].

Inspection Report# : [2011004](#) (*pdf*)

Significance:  Mar 31, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

Feedwater Control System Inadequate Corrective Actions Results in Power Transient

The inspectors reviewed a self-revealing finding involving failure to take adequate corrective actions on a degraded feedwater flow controller push-button, causing a recirculation flow control valve runback, reactor vessel level transient, and a resulting reactor power transient. On September 24, 2008, operations documented a deficiency in the function of the push-button, however station maintenance personnel failed to adequately address the identified deficiency. The push button was subsequently repaired and this issue was entered into the licensee's corrective action program as Condition Report CR-RBS-2011-00300.

The finding was more than minor because it was associated with the equipment performance attribute of the Initiating Events Cornerstone, and it affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors evaluated this finding using Phase 1 of Inspection Manual Chapter 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," and determined it to be of very low safety significance (Green) because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The inspectors determined that the apparent cause of the performance deficiency was the

failure to thoroughly evaluate the cause of the defective push-button's stickiness. Consequently, this finding has a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee failed to adequately review the results of the work order to ensure that the cause and extent of condition of the defective push-button was resolved in a timely manner [P.1(c)].

Inspection Report# : [2011002](#) (pdf)

Significance:  Dec 31, 2010

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Plug a Main Condenser Tube in Accordance with an Approved Work Order

The inspectors reviewed a self-revealing finding for the licensee's failure to plug a main condenser tube in accordance with an approved work order. Specifically, a plastic tube plug was not replaced with the required brass plug causing a tube leak requiring the plant to reduce power. The licensee entered this issue into their corrective action program as Condition Report CR-RBS-2010-04526.

The performance deficiency was more than minor because it was associated with the human performance attribute of the Initiating Events Cornerstone and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown, as well as power operations, in that the performance deficiency created a condition that upset plant stability by creating a condenser tube leak that prompted the plant to reduce power. The inspectors determined that the apparent cause of this finding was the licensee's failure to use human performance error-prevention techniques to ensure that the tube plugging was performed correctly. This finding therefore has a crosscutting aspect in the work practices component of the human performance area because the licensee did not communicate and use human error prevention techniques commensurate with the risk of the assigned task, such that work activities are performed safely [(H.4(a))].

Inspection Report# : [2010005](#) (pdf)

Mitigating Systems

Significance:  Jun 30, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Track and Document Plant Equipment Oil Usage

The inspectors identified a finding for the failure to properly document equipment oil additions in the oil lubrication accountability log per General Maintenance Procedure GMP-0015, "Lubrication Procedure." To correct the programmatic deficiencies, the station revised General Maintenance Procedure GMP-0015 instructions to enhance and amplify the requirement to record all oil additions in the lubrication accountability log, revise preventative maintenance tasks that sample or change oil to explicitly state "record oil additions in the lubrication accountability log," and to brief station personnel concerning changes to General Maintenance Procedure GMP-0015. The licensee entered this issue into their corrective action program as Condition Report CR-RBS-2011-02883.

The finding is more than minor because if left uncorrected the performance deficiency would have the potential to lead to a more significant safety concern. Using Inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding was determined to be of very low safety significance (Green) because it was not a design or qualification deficiency; did not represent either a loss of system safety function, an actual loss of safety function of a single train, or an actual loss of safety function; and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The inspectors determined that the apparent cause of the performance deficiency was incomplete work package instructions that did not explicitly state to record oil additions in the lubrication accountability log per General Maintenance Procedure GMP-0015, thereby making equipment operability conclusions based on incomplete monitored trends suspect and potentially inaccurate. Consequently, this finding has a cross-cutting aspect in the human performance area associated with the resources component because the station's work packages lacked the necessary instructions to adequately control the lubrication monitoring program [H.2(c)].

Inspection Report# : [2011003](#) (pdf)

Significance: **G** May 12, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Take Corrective Action for Service-Induced Failures of Gould J-series Relays

The inspectors reviewed a self-revealing green noncited violation of 10 CFR 50, Appendix B, Criterion XVI, “Corrective Actions,” for the licensee’s failure to take corrective action to address service-induced failures of Gould J series relays. In response, the licensee initiated condition report CR RBS 2010 06032 to ensure that appropriate levels of preventive maintenance are performed on high-critical components.

The performance deficiency was the licensee's failure to take adequate corrective actions to address service-induced failures of the high-critical, high-duty-cycle Gould J series relay designated as EHS MCC16B6D 33X1. This performance deficiency was determined to be more than minor and was therefore a finding because it impacted the Mitigating Systems Cornerstone attribute of equipment performance and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. This finding had very low safety significance because the finding was not a design or qualification deficiency confirmed not to result in a loss of operability, did not represent a loss of system safety function, did not represent a loss of safety function for a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding or severe weather initiating event. Because the apparent cause of this finding was the licensee’s misclassification of the failed relay within the preventive maintenance optimization program in 2008, and because the licensee’s performance in that program was not reflective of current licensee performance, no cross-cutting aspect was assigned to this finding.

Inspection Report# : [2011006](#) (*pdf*)

Significance: **G** Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Repetitive Service Water Pressure Control Valves Diaphragm Failures Affecting Control Building Chillers Operability

The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” for failure to promptly identify and correct adverse service water chemistry conditions to resolve repetitive service water pressure control valves diaphragm failures that affected operability of the control building chillers. Specifically, station personnel failed to address excessive internal corrosion in the pressure control valves, which resulted in loss of service water pressure control to the control building chillers. As immediate corrective action, the licensee replaced the damaged pressure control valve and is currently evaluating methods to preclude corrosion around the diaphragm. The licensee placed this issue into their corrective action program as Condition Report CR-RBS-2011-02126.

The finding was more than minor because it was associated with the equipment performance attribute of the reactor safety Mitigating Systems (MS) Cornerstone, and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, “Significance Determination Process,” Phase 1 Worksheet, the finding was determined to be of very low safety significance (Green), because it did not result in a loss of system safety function. The inspectors determined that the apparent cause of the performance deficiency was the repetitive failure of 1SWP-PVY32 diaphragm from rust barnacles that formed on the valve internal steel parts during low flow conditions. The apparent cause of the performance deficiency was the station’s failure to thoroughly evaluate the cause of the corrosion build up mechanism because the station treated diaphragm failures as a broke/fix maintenance item. Consequently, this finding has a crosscutting aspect in the area of human performance associated with the resources component because the licensee failed to minimize long-standing equipment issues [H.2(a)].

Inspection Report# : [2011002](#) (*pdf*)

Significance: **G** Mar 31, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Determine the Appropriate Preventive Maintenance Strategy and Task Frequency for the Reactor Core Isolation Cooling System Turbine Lube Oil Cooler Inlet Pressure Control Valve

The inspectors reviewed a self-revealing noncited violation of Technical Specification 5.4.1 for the licensee's failure to determine the appropriate preventive maintenance strategy and task frequency for the reactor core isolation cooling system turbine lube oil cooler inlet pressure control valve (E51-PCVF015). The vendor manual for the pressure control valve recommends that non-metallic parts (including diaphragms) be replaced after 5 years in service. On October 13, 2010, after being in service for more than ten years without diaphragm replacement, the valve developed a leak that rendered the reactor core isolation cooling system inoperable. The licensee replaced the damaged diaphragm and created a preventive maintenance activity for its periodically replacement. This issue was entered into the licensee's corrective action program as Condition Report CR-RBS-2010-05224.

This finding was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the associated cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the subject performance deficiency allowed a failure to occur that rendered the reactor core isolation cooling system inoperable for approximately 14 hours. Because this finding occurred while the unit was operating at full power, the inspectors used Inspection Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," to assess its risk significance. The reactor core isolation cooling diaphragm failure was determined to have occurred when the pump was secured; that is, the pump could have operated for 24 hours if it had not been shut down at that time. Therefore, the exposure time was equal to the repair time, which was 15.5 hours. The finding involved a loss of safety system function and therefore did not screen in Phase 1, requiring a Phase 2 evaluation. The inspectors used the Phase 2 pre-solved spreadsheet with a duration of 0-3 days to determine that the issue had very low significance (Green). The inspectors concurred with the licensee's determination that a "lack of technical rigor" had been the reason why the preventive maintenance evaluation of valve E51-PCVF015 had been incorrect, and was therefore the major contributor to the finding. The inspectors considered that this contributor does not reflect current licensee performance because this contributor is a human performance error that occurred in September 2006, and because in 2007, the licensee developed corrective actions to address a substantive crosscutting issue in human performance. Those actions are described in Condition Report CR-RBS-2007-00835 and included activities that changed the licensee's human performance program such that the human performance error that occurred in September of 2006 is not likely to re-occur. This finding therefore does not have a crosscutting aspect.

Inspection Report# : [2011002](#) (pdf)

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Control Rod Inspection Procedure

The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," involving an inadequate control rod inspection procedure. Specifically, the station's procedures only required inspection of a only 20 percent of the control rods that exceeded the inspection criteria, instead of all of them. The station currently has 18 CR 82M control rods in the reactor core in shutdown locations that have exceeded Westinghouse's inspection threshold exposure limits. In response to the inspectors' inquiries, the licensee reviewed their water chemistry and concluded the current tritium and boron levels indicated there was margin for control rod operability. The licensee intends to monitor the reactor coolant for increasing boron and tritium levels throughout this operating cycle. The licensee placed this issue into their corrective action program as Condition Report CR-RBS-2011-01704.

The finding is more than minor because it is associated with the equipment performance attribute of the reactor safety Mitigating Systems Cornerstone, and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to be of very low safety significance (Green) because it did not result in a loss of system safety function. The inspectors determined that the apparent cause of the performance deficiency was River Bend Station's failure to communicate relevant operating experience to affected internal and external stakeholders. This finding has a crosscutting aspect in the area of problem identification and resolution associated with the operating experience component because the licensee failed to appropriately apply all the CR 82M control rod inspection requirements provided by the control rod vendor [P.2(b)].

Inspection Report# : [2011002](#) (pdf)

Significance:  Dec 31, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Develop a Preventive Maintenance Schedule to Specify Inspection or Replacement of the O-Ring in the High Pressure Core Spray Lower Motor Bearing Drain Plug

The inspectors reviewed a self-revealing noncited violation of Technical Specification 5.4.1 for the licensee's failure to determine the appropriate preventive maintenance strategy and task frequency for the o-ring in the high pressure core spray lower motor bearing drain plug. As immediate correction action, the licensee replaced the o-ring. At the conclusion of the inspection, the licensee was in the process of determining the appropriate replacement frequency. The licensee entered this issue into their corrective action system as Condition Report CR-RBS-2010-05766.

This finding was more than minor because, if left uncorrected, it had the potential to lead to a more significant safety concern, in that if the licensee did not develop a preventive maintenance schedule for periodically replacing the subject o-ring, degradation of that o-ring due to aging could allow a leak that would drain oil from the lower motor bearing and thus render the high pressure core spray pump inoperable. As described in Inspection Manual 0609 Appendix A, a Phase 2 analysis using the presolved worksheet determined that this finding had very low (Green) risk significance. This finding has a crosscutting aspect in the operating experience component of the problem identification & resolution area because the licensee did not systematically collect, evaluate, and communicate to affected internal stakeholders in a timely manner relevant internal and external operating experience [P.2(a)].

Inspection Report# : [2010005](#) (*pdf*)

Significance:  Dec 31, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Two Examples of Completing Maintenance that Affected the Performance of Safety-Related Equipment but Was Not Properly Preplanned

The inspectors reviewed a two-example self-revealing green noncited violation of Technical Specification 5.4.1 for two occasions on which the licensee completed maintenance that affected the performance of safety-related equipment (high pressure core spray) but was not properly preplanned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances. As a result, the licensee overtorqued the high pressure core spray lower motor bearing drain plug causing the plug to fracture. This fracture resulted in excessive oil leakage that caused the pump to become inoperable. The violation is in the licensee's corrective action program as Condition Report CR-RBS-2011-00224.

These performance deficiencies were more than minor and therefore constituted a finding because they affected the equipment performance attribute of the Mitigating Systems Cornerstone, and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. As described in Inspection Manual 0609 Appendix A, a Phase 2 analysis using the presolved worksheet determined that this finding had very low risk significance. The finding has a crosscutting aspect in the resources component of the human performance area because the apparent cause of the finding was a procedure that was not adequate to assure nuclear safety [H.2(c)].

Inspection Report# : [2010005](#) (*pdf*)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Required Quality Control Inspections

Inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion X, "Inspection," for the failure to ensure that Quality Control verification inspections were consistently included and correctly specified in quality-affecting procedures and work instructions for construction-like work activities as required by the Quality Assurance Program. The licensee performed extensive reviews, and inspectors performed independent reviews of the licensee's conclusions as well as independent sampling, to confirm that improper or missed inspections did not actually affect the operability of plant equipment. Entergy initiated prompt fleet-wide corrective actions to ensure proper work order evaluation and proper inclusion of Quality Control verification inspections. This issue was entered into the corrective

action program under Condition Reports CR-HQN-2009-01184 and CR-HQN-2010-0013.

The failure to ensure that adequate Quality Control verification inspections were included in quality-affecting procedures and work instructions as required by the Quality Assurance Program was a performance deficiency. This programmatic deficiency was more than minor because, if left uncorrected, it could lead to a more significant safety concern in that the failure to check quality attributes could involve an actual impact to plant equipment. This issue affected the design control attribute of the Mitigating Systems Cornerstone because missed or improper quality control inspections during plant modifications could impact the availability, reliability, and capability of systems needed to respond to initiating events. This performance deficiency was determined to have very low safety significance in Phase 1 of the significance determination process since it was confirmed to involve a qualification deficiency that did not result in a loss of operability or functionality. The inspectors determined that this performance deficiency involved a crosscutting aspect related to the human performance area associated with decision making [H.1 (a)] because the licensee did not have an effective systematic process for obtaining interdisciplinary reviews of proposed work instructions to determine whether Quality Control verification inspections were appropriate. Inspection Report# : [2010005](#) (pdf)

Significance:  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement the Experience and Qualification Requirements of the Quality Assurance Program

Inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion II, "Quality Assurance Program," for the failure to implement the experience and qualification requirements of the Quality Assurance Program. As a result, the licensee failed to ensure that an individual assigned to the position of Quality Assurance Manager met the qualification and experience requirements of ANSI/ANS 3.1-1978 as required by the Quality Assurance Program. Specifically, the individual assigned to be the responsible person for the licensee's overall implementation of the Quality Assurance Program did not have at least 1 year of nuclear plant experience in the overall implementation of the Quality Assurance Program within the quality assurance organization prior to assuming those responsibilities. This issue was entered into the corrective action program as Condition Report CR-HQN-2010-00386.

Failure to ensure that an individual assigned to the position Quality Assurance Manager met the qualification and experience requirements of ANSI/ANS 3.1-1978 as required by the Quality Assurance Program was a performance deficiency. This performance deficiency was determined to be more than minor because, if left uncorrected, it could create a more significant safety concern. Failure to have a fully qualified individual providing overall oversight to the Quality Assurance Program had the potential to affect all cornerstones, but this finding will be tracked under the Mitigating Systems Cornerstone as the area most likely to be impacted. The issue was not suitable for quantitative assessment using existing Significance Determination Process guidance, so it was determined to be of very low safety significance using Inspection Manual Chapter 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." The inspectors determined that there was no crosscutting aspect associated with this finding because this issue was not indicative of current performance because the violation occurred more than 3 years ago.

Inspection Report# : [2010005](#) (pdf)

Significance:  Jun 02, 2010

Identified By: NRC

Item Type: VIO Violation

Failure to Ensure at Least One Train of Equipment Necessary to Achieve Hot Shutdown Conditions is Free of Fire Damage

The team identified a cited violation of License Condition 2.C.(10), "Fire Protection," for failing to ensure that the Division 1 standby service water support system to the Division 1 emergency diesel generator, which was required to achieve safe shutdown, was protected such that it remained free from fire damage under all conditions. This condition was identified by the licensee in May 2007, and entered into their corrective action program as a significant non-conforming condition in CR-RBS-2007-02102. The licensee subsequently initiated compensatory measures in the form of manual actions to protect the Division 1 emergency diesel generator. This issue was documented as a licensee-identified noncited violation in Inspection Report 2009002. River Bend has subsequently completed two refueling outages, six forced outages, and one emergency diesel generator work window of sufficient duration since identification of this condition and failed to correct the non-conformance. The team determined that schedule changes

resulted in a new completion date of January 2011.

The failure to ensure that one train of systems necessary to achieve and maintain hot shutdown conditions from either the control room or emergency control station(s) was free of fire damage and to correct this significant non-conforming condition in a timely manner is a performance deficiency. This performance deficiency was more than minor because it was associated with the protection against external factors (fire) attribute of the Mitigating Systems Cornerstone and adversely 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 team evaluated this deficiency using Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," because it affected fire protection defense-in-depth strategies involving post fire safe shutdown systems with plant-wide consequences. A Phase 3 SDP risk assessment was performed by a senior reactor analyst. The bounding change in conditional core damage frequency for a 1-year exposure is the Fire Mitigation Frequency (4.30E-08/year) multiplied by the change in conditional core damage probability (0.9) for a value of 3.87E-08/year. This value indicates the finding has very low safety significance (Green). Because the licensee failed to correct this violation, this violation is being treated as a cited violation, consistent with the NRC Enforcement Policy. This finding had a crosscutting aspect in the Work Control component of the Human Performance area because the licensee did not appropriately plan work activities to support long-term equipment reliability by limiting temporary modifications, operator workarounds, safety systems unavailability, and reliance on manual actions [H.3(b)]. (Section 1R05.01)

Inspection Report# : [2010006](#) (*pdf*)

Barrier Integrity

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Standby Gas Treatment Electric Heater Power Output Calculation

The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III "Design Control," for an inadequate calculation methodology used in determining standby gas treatment system operability. The inspectors found that the calculation neither considered instrument uncertainty nor applied a proper voltage drop from the breaker to the standby gas treatment system filter train heater. The licensee entered this issue into the licensee's corrective action program as Condition Report CR-RBS-2011-07332.

The finding was more than minor because it was associated with the design control attribute of the Barrier Integrity Cornerstone to maintain radiological barrier functionality of standby gas treatment trains, and affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, operating the standby gas system filter train heaters without sufficient output power is detrimental to the charcoal filters ability to retain radioactive iodine. This could result in a greater amount of radiation release to the environment in the event of an accident. In accordance with Inspection manual Chapter 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," the Phase 1 significance determination process screening determined the finding to be only of very low safety significance (Green) because the finding only represented a degradation of the radiological barrier function provided for the standby gas treatment system. The apparent cause of this finding was the decision to develop an engineering evaluation that did not include instrument uncertainty and did not validate the correct voltage drop between the filter train heater feeder breaker and the heater elements. The finding has a crosscutting aspect in the area of human performance associated with the decision-making component because station personnel failed to use conservative assumptions when developing the modified output power methodology for operation of the standby gas treatment system filter heaters with only 8 of 9 heater elements installed [H.1(b)].

Inspection Report# : [2011004](#) (*pdf*)

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement Procedure AOP-0027, "Fuel Handling Mishaps"

The inspector identified a Green noncited violation of Technical Specification 5.4.1.a, "Procedures" for River Bend Station fuel handling personnel failing to follow AOP-0027, "Fuel Handling Mishaps," when an actual fuel handling event occurred. Instead of entering the AOP, fuel handling personnel continued to move a fuel assembly after equipment damage and potential fuel damage. The licensee entered this issue into their corrective action program as Condition Report CR-RBS-2011-03692.

This failure to follow procedures is a performance deficiency. The performance deficiency is more than minor, and therefore a finding, because it adversely impacted the human performance attribute of the barrier integrity cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding) protect the public from radionuclide releases caused by accidents or events. Using Manual Chapter 0609, "Significance Determination Process," Phase 1 worksheets, the inspector determined the finding had very low safety significance (Green) because the fuel cladding barrier was potentially degraded but there was no release of radionuclides. This finding has a crosscutting aspect in the area of problem identification and resolution associated with the operating experience component because the licensee failed to implement and institutionalize operating experience through changes to station procedures and training programs [P.2(b)].

Inspection Report# : [2011002](#) (pdf)

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: FIN Finding

Failure to Follow Fuel Handling Guidelines

The inspector identified a finding for failure to follow River Bend Station's "Fuel Handling Guideline." A fuel handling event occurred at River Bend Station on January 21, 2011, when a fuel assembly was grappled and raised approximately one foot rather than fully withdrawn from the core. With the fuel assembly only partially withdrawn from the core, the refuel platform was erroneously moved horizontally approximately five feet. This inappropriate stop at one foot followed by inappropriate horizontal movement of the refuel platform with the fuel partially inserted into the core resulted in equipment damage and potential fuel damage. The licensee entered this issue into their corrective action program as Condition Report CR-RBS-2011-03693.

This failure to follow the guideline is a performance deficiency. The performance deficiency is more than minor, and therefore a finding, because it adversely impacted the human performance attribute of the Barrier Integrity Cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding) protect the public from radionuclide releases caused by accidents or events. Using Manual Chapter 0609, "Significance Determination Process," Phase 1 worksheets, the inspector determined the finding had very low safety significance (Green) because the fuel cladding barrier was potentially degraded but there was no release of radionuclides. This finding has a crosscutting aspect in the area of human performance associated with the decision making component because the licensee made a safety-significant decision without verifying the validity of underlying assumptions [H.1(b)].

Inspection Report# : [2011002](#) (pdf)

Emergency Preparedness

Significance:  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Reduction in ERO Staffing Decreased Emergency Plan Effectiveness

The inspector identified a Severity Level IV noncited violation of 10 CFR 50.54(q) for changes to the licensee's emergency plans that decreased the effectiveness of those plans without NRC approval. Specifically, the effectiveness of River Bend Station Emergency Plan, Revision 36, was reduced by removal of the Health Physics Communicator position from the emergency response organization. The licensee's failure to recognize that Revision 36 decreased the effectiveness of licensee emergency plans was a performance deficiency. The licensee has entered this issue into their corrective action system as CR-RBS-2011-02366.

This finding is more than minor because it has a potential effect on the licensee's emergency response capabilities and because the licensee may not be capable of implementing adequate measures to protect the health and safety of the public when the effectiveness of its emergency response organization has been reduced. The finding was evaluated using the NRC Enforcement Policy because it impeded the regulatory process as defined by Manual Chapter 0609, Appendix B, Section 2.2(e). The finding was determined to be Severity Level IV because it decreased the licensee's ability to meet or implement a regulatory requirement not related to assessment or notification.
Inspection Report# : [2011002](#) (*pdf*)

Occupational Radiation Safety

Significance: G Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Properly Control and Guard the Entrance to a Locked High Radiation Area

The inspectors identified a noncited violation of Technical Specification 5.7.2 for failure to properly control and guard a high radiation area with dose rates greater than or equal to 1000 mrem/hr. Specifically, on January 25, 2011, while touring the outside area between the auxiliary building and the radioactive waste building, the inspectors noted that the access gate to a locked high radiation area was open. A guard for the locked high radiation area was positioned in a tent enclosure to the right of the gate, but was not in a position to maintain "line-of-sight" control of the access to the locked high radiation area. The licensee immediately repositioned the guard and enhanced the tent construction to provide the necessary control for access to the area. The licensee placed this issue into their corrective action program as CR 2011-01154.

The finding was more than minor because it was associated with the Occupational Radiation Safety Cornerstone attribute (exposure control) of program and process and affected the cornerstone objective, in that, the failure to properly control access to a high radiation area with dose rates in excess of 1000 mrem/hr had the potential to increase personnel dose. Using the Occupational Radiation Safety Significance Determination Process, the inspectors determined the finding to have very low safety significance because it was not associated with ALARA planning or work controls, there was no overexposure, there was no substantial potential for an overexposure, and the ability to assess dose was not compromised. The finding has a human performance crosscutting aspect associated with work control, work planning activities, because the individuals failed to consider job site conditions which would impact the ability of the guard to adequately observe the entrance to the locked high radiation area [H.3(a)].

Inspection Report# : [2011002](#) (*pdf*)

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

Significance: N/A May 12, 2011

Identified By: NRC

Item Type: FIN Finding

River Bend Plant Biennial PI&R Inspection Summary

The team determined that the licensee's program for identifying, prioritizing, and correcting conditions adverse to quality was effective. With few exceptions, the licensee identified conditions adverse to quality at a low threshold, properly classified and evaluated those conditions, and developed appropriate corrective actions.

The licensee appropriately evaluated industry operating experience for relevance to the facility and had entered applicable items in the corrective action program. The licensee used industry operating experience when performing root cause and apparent cause evaluations. In addition, the licensee performed effective quality assurance audits and self-assessments.

The team determined that the licensee had a healthy safety-conscious work environment in that workers felt free to raise safety concerns without fear of retaliation using all avenues available.

Inspection Report# : [2011006](#) (*pdf*)

Last modified : January 04, 2012