UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 E. LAMAR BLVD
ARLINGTON, TX 76011-4511

August 3, 2017

Mr. William F. Maguire, Site Vice President
Entergy Operations, Inc.
River Bend Station
5485 U.S. Highway 61N
St. Francisville, LA 70775

SUBJECT: RIVER BEND STATION – NRC INTEGRATED INSPECTION REPORT 05000458/2017002

Dear Mr. Maguire:

On June 30, 2017, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your River Bend Station, Unit 1. On July 13, 2017, the NRC inspectors discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

NRC inspectors documented two findings of very low safety significance (Green) in this report. Both of these findings involved violations of NRC requirements. The NRC is treating these violations as non-cited violations consistent with Section 2.3.2.a of the NRC Enforcement Policy.

If you contest the violations or significance of these non-cited violations, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV; the Director, Office of Enforcement; and the NRC resident inspector at the River Bend Station.

If you disagree with a cross-cutting aspect assignment in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV; and the NRC resident inspector at the River Bend Station.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at http://www.nrc.gov/reading-rm/adams.html and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Jason W. Kozal, Chief
Project Branch C
Division of Reactor Projects

Docket No.: 50-458
License No.: NPF-47

Enclosure:
Inspection Report 05000458/2017002
w/Attachments:
1. Supplemental Information
2. Cyber Security Follow-up Document Request

RIVER BEND STATION – NRC INTEGRATED INSPECTION REPORT 05000458/2017002 – DATED AUGUST 3, 2017

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket:	05000458
License:	NPF-47
Report:	05000458/2017002
Licensee:	Entergy Operations, Inc.
Facility:	River Bend Station
Location:	5485 U.S. Highway 61N St. Francisville, LA 70775
Dates:	April 1 through June 30, 2017
Inspectors:	J. Sowa, Senior Resident Inspector B. Parks, Resident Inspector S. Graves, Senior Reactor Inspector S. Hedger, Emergency Preparedness Inspector
Approved By:	J. Kozal, Chief Project Branch C Division of Reactor Projects

Enclosure

SUMMARY

IR 05000458/2017002; 04/01/2017 – 06/30/2017; River Bend Station; Problem Identification & Resolution; Follow-up of Events and Notices of Enforcement Discretion

The inspection activities described in this report were performed between April 1 and June 30, 2017, by the resident inspectors at River Bend Station and inspectors from the NRC's Region IV office. Two findings of very low safety significance (Green) are documented in this report. Both of these findings involved violations of NRC requirements. The significance of inspection findings is indicated by their color (i.e., Green, greater than Green, White, Yellow, or Red), determined using NRC Inspection Manual Chapter 0609, "Significance Determination Process," dated April 29, 2015. Their cross-cutting aspects are determined using NRC Inspection Manual Chapter 0310, "Aspects within the Cross-Cutting Areas," dated December 4, 2014. Violations of NRC requirements are dispositioned in accordance with the NRC Enforcement Policy. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," dated July 2016.

Cornerstone: Mitigating Systems

- Green. The inspectors reviewed a self-revealing, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to correctly translate the design basis into plant specifications. Specifically, the licensee implemented a breaker design in the control building air conditioning system that allowed a single failure of one train of the system to render the other train inoperable, contrary to the design basis. The licensee entered this condition into their corrective action program as Condition Report CR-RBS-2017-01740. The licensee restored compliance by implementing modifications to the affected breakers designed to eliminate the single failure vulnerability.

  The failure to correctly translate the design basis into plant specifications was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the design control attribute of the 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. Specifically, the licensee's failure to implement an appropriate design in the main control room and standby switchgear room air conditioning subsystems adversely affected the availability, reliability, and capability of safety-related components that rely on those subsystems for cooling. The inspectors performed the initial significance determination using NRC Inspection Manual Chapter 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions." The finding required a detailed risk evaluation because it involved a loss of system and/or function. A Region IV senior reactor analyst performed a detailed risk evaluation for the issue and determined the issue to be of very low safety significance (Green). No cross-cutting aspect was assigned because the finding did not reflect current performance. (Section 4OA3.3)

Cornerstone: Barrier Integrity

- Green. The inspectors reviewed multiple examples of a self-revealing, non-cited violation of Technical Specification 3.0.4, "Limiting Condition for Operation Applicability," for the licensee's failure to restore safety-related equipment to operable status prior to changing modes. Specifically, the licensee failed to restore Division I of the Control Room Fresh Air

system to operable status prior to entering Mode 2 on March 8, 2017, and again on March 11, 2017. The licensee entered this condition into their corrective action program as Condition Report CR-RBS-2017-03082. The licensee restored compliance by properly positioning damper HVC-DMP4A and restoring the Division I Control Room Fresh Air system to operable.

The failure to restore Division I of the Control Room Fresh Air system to operable status prior to entering Mode 2 was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the structures, systems, and components (SSC) and barrier performance attribute of the Barrier Integrity Cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Specifically, the incorrect positioning of damper HVC-DMP4A resulted in inadequate air flow through Division I of the Control Room Fresh Air system and rendered it inoperable. The inspectors screened the finding in accordance with NRC Inspection Manual Chapter 0609, "Significance Determination Process." Using NRC Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 3 – "Barrier Integrity Screening Questions," the inspectors determined that the finding was of very low safety significance (Green) because it only represented a degradation of the radiological barrier function provided for the control room. This finding had a cross-cutting aspect in the area of human performance, challenge the unknown, because individuals did not stop when faced with uncertain conditions. Specifically, workers positioned damper HVC-DMP4A without work instructions or specified torque values [H.11]. (Section 4OA2.3)

PLANT STATUS

River Bend Station began the inspection period at 100 percent reactor thermal power.

On April 29, 2017, operators reduced power to 65 percent for suppression testing to find and suppress a suspected fuel leak. The station returned to 100 percent power on May 5, 2017.

On June 8, 2017, operators reduced power to 85 percent to conduct troubleshooting on the "C" feedwater regulating valve. The station returned to 100 percent power on June 10, 2017.

On June 23, 2017, an automatic reactor scram occurred due to equipment issues associated with the main turbine generator voltage regulator. Operators conducted a reactor startup on June 25, 2017. Operators were in the process of increasing the reactor to full power at the end of the inspection period. Reactor power was 88 percent on June 30, 2017.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

.1 Summer Readiness of Offsite and Alternate-AC Power Systems

a. Inspection Scope

On June 15, 2017, the inspectors completed an inspection of the station's offsite and alternate-ac power systems. The inspectors inspected the material condition of these systems, including transformers and other switchyard equipment to verify that plant features and procedures were appropriate for operation and continued availability of offsite and alternate-ac power systems. The inspectors reviewed outstanding work orders and open condition reports for these systems. The inspectors walked down the switchyard to observe the material condition of equipment providing offsite power sources. The inspectors assessed corrective actions for identified degraded conditions and verified that the licensee had considered the degraded conditions in its risk evaluations and had established appropriate compensatory measures. The inspectors verified that the licensee's procedures included appropriate measures to monitor and maintain availability and reliability of the offsite and alternate-ac power systems.

These activities constitute one sample of summer readiness of offsite and alternate-ac power systems, as defined in Inspection Procedure 71111.01.

b. Findings

No findings were identified.

.2 Readiness for Impending Adverse Weather Conditions

a. Inspection Scope

On May 3, 2017, the inspectors completed an inspection of the station's readiness for impending adverse weather conditions. The inspectors reviewed plant design features, the licensee's procedures to respond to tornadoes and high winds, and the licensee's planned implementation of these procedures. The inspectors evaluated operator staffing and accessibility of controls and indications for those systems required to control the plant.

These activities constitute one sample of readiness for impending adverse weather conditions, as defined in Inspection Procedure 71111.01.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)

Partial Walkdown

a. Inspection Scope

The inspectors performed partial system walkdowns of the following risk-significant systems:

- April 3, 2017, reactor core isolation cooling system
- April 18, 2017, Division I standby service water system
- April 20, 2017, Division I residual heat removal system

The inspectors reviewed the licensee's procedures and system design information to determine the correct lineup for the systems. They visually verified that critical portions of the systems were correctly aligned for the existing plant configuration.

These activities constitute three partial system walkdown samples, as defined in Inspection Procedure 71111.04.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

.1 Quarterly Inspection

a. Inspection Scope

The inspectors evaluated the licensee's fire protection program for operational status and material condition. The inspectors focused their inspection on four plant areas important to safety:

- April 3, 2017, reactor core isolation cooling pump room, fire area AB-4/Z-1 and Z-2
- April 20, 2017, standby cooling tower pump A room, fire area PH-1/Z-1
- April 20, 2017, low pressure core spray pump room, fire area AB-6/Z-1
- April 20, 2017, standby liquid control area, fire area RC-4/Z-4

For each area, the inspectors evaluated the fire plan against defined hazards and defense-in-depth features in the licensee's fire protection program. The inspectors evaluated control of transient combustibles and ignition sources, fire detection and suppression systems, manual firefighting equipment and capability, passive fire protection features, and compensatory measures for degraded conditions.

These activities constitute four quarterly inspection samples, as defined in Inspection Procedure 71111.05.

b. Findings

No findings were identified.

.2 Annual Inspection

a. Inspection Scope

This evaluation included observation of an announced fire drill for training on May 19, 2017.

During this drill, the inspectors evaluated the capability of the fire brigade members, the leadership ability of the brigade leader, the brigade's use of turnout gear and fire-fighting equipment, and the effectiveness of the fire brigade's team operation. The inspectors also reviewed whether the licensee's fire brigade met NRC requirements for training, dedicated size and membership, and equipment.

These activities constitute one annual inspection sample, as defined in Inspection Procedure 71111.05.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program and Licensed Operator Performance (71111.11)

.1 Review of Licensed Operator Requalification

a. Inspection Scope

On May 2, 2017, the inspectors observed an evaluated simulator scenario performed by an operating crew. The inspectors assessed the performance of the operators and the

evaluators' critique of their performance. The inspectors also assessed the modeling and performance of the simulator during the scenario.

These activities constitute completion of one quarterly licensed operator requalification program sample, as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

.2 Review of Licensed Operator Performance

a. Inspection Scope

On April 30, 2017, the inspectors observed the performance of on-shift licensed operators in the plant's main control room. At the time of the observations, the plant was in a period of heightened activity due to performance of power suppression testing.

In addition, the inspectors assessed the operators' adherence to plant procedures, including the conduct of operations procedure, and other operations department policies.

These activities constitute completion of one quarterly licensed operator performance sample, as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

Routine Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed two instances of a degraded performance or condition of safety-significant structures, systems, and components (SSCs):

- April 6, 2017, Division I control building chilled water system, functional failure review
- June 22, 2017, reactor core isolation cooling system, functional failure review

The inspectors reviewed the extent of condition of possible common cause SSC failures and evaluated the adequacy of the licensee's corrective actions. The inspectors reviewed the licensee's work practices to evaluate whether these may have played a role in the degradation of the SSCs. The inspectors assessed the licensee's characterization of the degradation in accordance with 10 CFR 50.65 (the Maintenance Rule), and verified that the licensee was appropriately tracking degraded performance and conditions in accordance with the Maintenance Rule.

These activities constitute completion of two maintenance effectiveness samples, as defined in Inspection Procedure 71111.12.

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

a. Inspection Scope

The inspectors reviewed five risk assessments performed by the licensee prior to changes in plant configuration and the risk management actions taken by the licensee in response to elevated risk:

- April 6, 2017, yellow risk condition during Division I residual heat removal surveillance testing concurrent with emergent work on Division I control room fresh air system
- April 20, 2017, yellow risk condition during planned maintenance on normal service water pump SWP-P7C
- May 1, 2017, green risk condition during Division I emergency diesel generator maintenance outage
- May 16, 2017, yellow risk condition during signature testing of E12-MOVF068B, service water supply isolation to residual heat removal heat exchanger B
- May 25, 2017, yellow risk condition during transmission and distribution system maintenance at Fancy Point switchyard

The inspectors verified that these risk assessments were performed timely and in accordance with the requirements of 10 CFR 50.65 (the Maintenance Rule) and plant procedures. The inspectors reviewed the accuracy and completeness of the licensee's risk assessments and verified that the licensee implemented appropriate risk management actions based on the results of the assessments.

The inspectors verified that the licensee appropriately developed and followed a work plan for these activities. The inspectors verified that the licensee took precautions to minimize the impact of the work activities on unaffected SSCs.

These activities constitute completion of five maintenance risk assessments and emergent work control inspection samples, as defined in Inspection Procedure 71111.13.

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15)

a. Inspection Scope

The inspectors reviewed four operability determinations that the licensee performed for degraded or nonconforming SSCs:

- April 3, 2017, operability determination of high pressure core spray test return valve to the suppression pool anti-rotation device misalignment (CR-RBS-2017-02790)

- May 1, 2017, operability determination of Division I emergency diesel generator air start valve test failures (CR-RBS-2017-03640)

- May 23, 2017, operability determination of incorrect lubricating oil added to Division III emergency diesel generator (CR-RBS-2017-04128)

- May 31, 2017, operability determination of reactor core isolation cooling with gland seal compressor non-functional (CR-RBS-2017-02465)

The inspectors reviewed the timeliness and technical adequacy of the licensee's evaluations. Where the licensee determined the degraded SSC to be operable, the inspectors verified that the licensee's compensatory measures were appropriate to provide reasonable assurance of operability. The inspectors verified that the licensee had considered the effect of other degraded conditions on the operability of the degraded SSC.

These activities constitute completion of four operability and functionality review samples, as defined in Inspection Procedure 71111.15.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

a. Inspection Scope

On April 26, 2017, the inspectors reviewed a permanent plant modification of the fire protection system to install plant connections to allow for connection of alternate backup pumps.

The inspectors reviewed the design and implementation of the modification. The inspectors verified that work activities involved in implementing the modification did not adversely impact operator actions that may be required in response to an emergency or other unplanned event. The inspectors verified that post-modification testing was adequate to establish the operability of the SSC as modified.

These activities constitute completion of one permanent plant modification inspection sample, as defined in Inspection Procedure 71111.18.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed six post-maintenance testing activities that affected risk-significant SSCs:

- April 5, 2017, work order (WO) 00470284-02, "Standby Liquid Control Pump 1A Post Maintenance Test," following replacement of standby liquid control pump 1A discharge header relief valve C41-RVF029A
- April 24, 2017, WO 52330677, "MSIV Cold Shutdown Full Stroke Operability Test," following replacement of B21-AOVF022B inboard main steam isolation valve actuator
- May 11, 2017, WO 00443688, "Division I Diesel Generator 184 Operability Test," following maintenance outage on Division I emergency diesel generator
- May 30, 2017, WO 52619978, "TSP-0010: RCIC Over Speed Trip Test," following maintenance on reactor core isolation cooling trip throttle valve
- June 1, 2017, WO 00476235, "Retest of Control Building Chilled Water Pump HVK-P1A," following replacement of HVK-P1A motor
- June 15, 2017, WO 00448738, "Retest of Division II Emergency Diesel Generator," following replacement of solenoid operated valves EGS-SOV20B and EGS-SOV21B

The inspectors reviewed licensing- and design-basis documents for the SSCs and the maintenance and post-maintenance test procedures. The inspectors observed the performance of the post-maintenance tests to verify that the licensee performed the tests in accordance with approved procedures, satisfied the established acceptance criteria, and restored the operability of the affected SSCs.

These activities constitute completion of six post-maintenance testing inspection samples, as defined in Inspection Procedure 71111.19.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed three risk-significant surveillance tests and reviewed test results to verify that these tests adequately demonstrated that the SSCs were capable of performing their safety functions:

In-service tests:

- May 31, 2017, STP-209-6310, “RCIC Quarterly Pump and Valve Operability Test,” performed on March 12, 2017

Other surveillance tests:

- May 19, 2017, STP-309-0612, “Division II Diesel Generator 24 Hour Run,” performed on May 18, 2017
- June 27, 2017, STP-209-6800, “RCIC Cold Shutdown Valve Operability Test,” performed on February 27, 2017

The inspectors verified that these tests met technical specification requirements, that the licensee performed the tests in accordance with their procedures, and that the results of the tests satisfied appropriate acceptance criteria. The inspectors verified that the licensee restored the operability of the affected SSCs following testing.

These activities constitute completion of three surveillance testing inspection samples, as defined in Inspection Procedure 71111.22.

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP2 Alert and Notification System Evaluation (71114.02)

a. Inspection Scope

The inspector verified the adequacy of the licensee’s methods for testing the primary and backup alert and notification system (ANS). The inspector also reviewed the licensee’s program for identifying emergency planning zone locations requiring tone alert radios and for distributing the radios, and reviewed audits of distribution records. The inspector interviewed licensee personnel responsible for the maintenance of the primary and backup ANS and reviewed a sample of corrective action program reports written for ANS problems. The inspector compared the licensee’s ANS testing program with criteria in NUREG-0654, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,” Revision 1; FEMA Report REP-10, “Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants”; and the licensee’s current FEMA-approved ANS design report, “River Bend Station ANS SWS Upgrade Project, FEMA REP-10 Design Report Addendum,” Revision 0, dated March 1, 2013.

These activities constitute completion of one ANS evaluation sample, as defined in Inspection Procedure 71114.02.

b. Findings

No findings were identified.

1EP3 Emergency Response Organization (ERO) Staffing and Augmentation System (71114.03)

a. Inspection Scope

The inspector verified the licensee's ERO on-shift and augmentation staffing levels were in accordance with the licensee's emergency plan commitments. The inspector reviewed documentation and discussed with licensee staff the operability of primary and backup systems for augmenting the on-shift emergency response staff to verify the adequacy of the licensee's methods for staffing emergency response facilities, including the licensee's ability to staff pre-planned alternate facilities. The inspector also reviewed records of ERO augmentation tests and events to determine whether the licensee had maintained a capability to staff emergency response facilities within emergency plan timeliness commitments.

These activities constitute completion of one ERO staffing and augmentation testing sample, as defined in Inspection Procedure 71114.03.

b. Findings

No findings were identified.

1EP5 Maintenance of Emergency Preparedness (71114.05)

a. Inspection Scope

The inspector reviewed the following for the period of September 2015 to May 2017:

- After-action reports for emergency classifications and events
- After-action evaluation reports for licensee drills and exercises
- Independent audits and surveillances of the licensee's emergency preparedness program
- Self-assessments of the emergency preparedness program conducted by the licensee
- Licensee evaluations of changes made to the emergency plan and emergency plan implementing procedures
- Drill and exercise performance issues entered into the licensee's corrective action program
- Emergency preparedness program issues entered into the licensee's corrective action program
- Maintenance records for equipment supporting the emergency preparedness program

- Emergency response organization and emergency planner training records

The inspector reviewed summaries of 115 corrective action program reports associated with emergency preparedness and selected 20 to review against program requirements to determine the licensee's ability to identify, evaluate, and correct problems in accordance with planning standard 10 CFR 50.47(b)(14) and 10 CFR Part 50, Appendix E, IV.F. The inspector verified that the licensee accurately and appropriately identified and corrected emergency preparedness weaknesses during critiques and assessments.

The inspector reviewed summaries of multiple licensee screenings and two licensee evaluations of the impact of changes to the emergency plan and implementing procedures, and selected six screenings and two evaluations to review against program requirements to determine the licensee's ability to identify reductions in the effectiveness of the emergency plan in accordance with the requirements of 10 CFR 50.54(q)(3) and 50.54(q)(4). The inspector verified that evaluations of proposed changes to the licensee's emergency plan appropriately identified the impact of the changes prior to being implemented.

The inspector reviewed summaries of 95 records pertaining to the maintenance of equipment and facilities used to implement the emergency plan, and selected 10 to review against program requirements to determine the licensee's ability to maintain equipment in accordance with the requirements of 10 CFR 50.47(b)(8) and 10 CFR Part 50, Appendix E, IV.E. The inspector verified that equipment and facilities were maintained in accordance with the commitments of the licensee's emergency plan.

These activities constitute completion of one sample of the maintenance of the licensee's emergency preparedness program, as defined in Inspection Procedure 71114.05.

b. Findings

No findings were identified.

1EP6 Drill Evaluation (71114.06)

Training Evolution Observation

a. Inspection Scope

On May 2, 2017, the inspectors observed simulator-based licensed operator requalification training that included implementation of the licensee's emergency plan. The inspectors verified that the licensee's emergency classifications, offsite notifications, and protective action recommendations were appropriate and timely. The inspectors verified that any emergency preparedness weaknesses were appropriately identified by the evaluators and entered into the corrective action program for resolution.

These activities constitute completion of one training observation sample, as defined in Inspection Procedure 71114.06.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Security

4OA1 Performance Indicator Verification (71151)

.1 Safety System Functional Failures (MS05)

a. Inspection Scope

For the period of April 2016 through March 2017, the inspectors reviewed licensee event reports, maintenance rule evaluations, and other records that could indicate whether safety system functional failures had occurred. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, and NUREG-1022, "Event Reporting Guidelines: 10 CFR 50.72 and 50.73," Revision 3, to determine the accuracy of the data reported.

These activities constitute verification of the safety system functional failures performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.2 Mitigating Systems Performance Index: Emergency AC Power Systems (MS06)

a. Inspection Scope

The inspectors reviewed the licensee's mitigating system performance index data for the period of April 2016 through March 2017 to verify the accuracy and completeness of the reported data. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data.

These activities constitute verification of the mitigating system performance index for emergency ac power systems, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.3 Mitigating Systems Performance Index: High Pressure Injection Systems (MS07)

a. Inspection Scope

The inspectors reviewed the licensee's mitigating system performance index data for the period of April 2016 through March 2017 to verify the accuracy and completeness of the reported data. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data.

These activities constitute verification of the mitigating system performance index for high pressure injection systems, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.4 Drill/Exercise Performance (EP01)

a. Inspection Scope

The inspectors reviewed the licensee's evaluated exercises, and selected drill and training evolutions that occurred between July 2016 and March 2017 to verify the accuracy of the licensee's data for classification, notification, and protective action recommendation opportunities. The inspectors reviewed a sample of the licensee's completed classifications, notifications, and protective action recommendations to verify their timeliness and accuracy. The inspectors used Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data. The specific documents reviewed are described in the attachment to this report.

These activities constitute verification of the drill/exercise performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.5 Emergency Response Organization Drill Participation (EP02)

a. Inspection Scope

The inspectors reviewed the licensee's records for participation in drill and training evolutions between July 2016 and March 2017 to verify the accuracy of the licensee's data for drill participation opportunities. The inspectors verified that all members of the licensee's Emergency Response Organization (ERO) in the identified key positions had been counted in the reported performance indicator data. The inspectors reviewed the licensee's basis for reporting the percentage of ERO members who participated in a drill. The inspectors reviewed drill attendance records and verified a sample of those reported as participating. The inspectors used Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data. The specific documents reviewed are described in the

attachment to this report.

These activities constitute verification of the ERO drill participation performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.6 Alert and Notification System Reliability (EP03)

a. Inspection Scope

The inspectors reviewed the licensee's records of ANS tests conducted between July 2016 and March 2017 to verify the accuracy of the licensee's data for siren system testing opportunities. The inspectors reviewed procedural guidance on assessing ANS opportunities and the results of periodic ANS operability tests. The inspectors used Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data. The specific documents reviewed are described in the attachment to this report.

These activities constitute verification of the ANS reliability performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152)

.1 Routine Review

a. Inspection Scope

Throughout the inspection period, the inspectors performed daily reviews of items entered into the licensee's corrective action program and periodically attended the licensee's condition report screening meetings. The inspectors verified that licensee personnel were identifying problems at an appropriate threshold and entering these problems into the corrective action program for resolution. The inspectors verified that the licensee developed and implemented corrective actions commensurate with the significance of the problems identified. The inspectors also reviewed the licensee's problem identification and resolution activities during the performance of the other inspection activities documented in this report.

b. Findings

No findings were identified.

.2 Semiannual Trend Review

a. Inspection Scope

The inspectors reviewed the licensee's corrective action program, performance indicators, system health reports, causal analyses, and other documentation to identify trends that might indicate the existence of a more significant safety issue. The inspectors verified that the licensee was taking corrective actions to address identified adverse trends.

These activities constitute completion of one semiannual trend review sample, as defined in Inspection Procedure 71152.

b. Observations and Assessments

The inspectors identified an adverse trend in the area of oversight of contractor maintenance. After observing an increased number of contractor maintenance issues in the most recent refueling outage (RFO19), the inspectors performed a condition report search for the term "contractor" for the period from January 1, 2017, to June 30, 2017, which included RFO19. The search yielded 35 condition reports, six of which involved a failure on the part of contractors to follow site work procedures. The inspectors performed the same search over the period from January 1, 2015, to June 30, 2015, which included the previous refueling outage (RFO18). The search yielded 24 condition reports, two of which involved a failure on the part of contractors to follow site work procedures. In addition to the increase in condition reports, three additional contractor-related work control failures from the most recent outage provide evidence for the adverse trend:

- March 7, 2017: A valve in the Division I penetration valve leakage control system was removed and replaced. A step in the restoration procedure required contractor personnel to inform the control room when the valve was reinstalled so that it could be positioned in accordance with the system lineup. Contractor personnel failed to perform this step, and the valve was never restored to its appropriate position. During subsequent surveillance testing of the system, the Division I penetration valve leakage control system compressor tripped on high temperature due to the valve being in the wrong position.

- March 10, 2017: Improper installation of a tee compression fitting associated with the new turbine digital electrohydraulic control system modification caused a steam leak that ultimately led to a reactor scram during startup. After identifying the leak, contractor personnel involved in the installation tightened down on the compression fitting, likely making the leak worse. They took this action without informing the control room or obtaining the required permission.

- March 13, 2017: Contractor personnel incorrectly landed leads for the control room indicators for main steam line B and C flow. The condition was discovered at power when these indicators were observed to be downscale.

c. Findings

No findings were identified.

.3 Annual Follow-up of Selected Issues

a. Inspection Scope

The inspectors selected two issues for an in-depth follow-up:

- On April 6, 2017, the station conducted surveillance testing of the Division I Control Room Fresh Air (CRFA) system. The test found that measured flow was lower than the acceptance criteria. The station conducted a Failure Modes and Effects Analysis and determined manual volume damper HVC-DMP4A was not in the correct position. Station personnel found the damper in a nearly closed position, which caused low air flow through the CRFA system and resulted in failed surveillance tests. The inspectors reviewed the Adverse Condition Analysis (ACA) for the event. The ACA concluded that damper HVC-DMP4A was out of position because previous maintenance on the damper did not use proper work instructions and also did not include vendor specified torque values. The licensee repositioned damper HVC-DMP4A and successfully conducted surveillance testing. During the period of time when HVC-DMP4A was closed, Division I CRFA system was inoperable. With the Division I CRFA system inoperable, the plant conducted a plant startup on March 8, 2017, and again on March 11, 2017. Changing reactor modes during a plant startup with the Division I CRFA system inoperable is a condition prohibited by technical specifications.

  The inspectors assessed the licensee's completed corrective actions. The inspectors verified that the licensee appropriately prioritized the planned corrective actions and that these actions were adequate to correct the condition.

- During an in-office inspection from April 24, 2017, through May 3, 2017, the inspector reviewed the cyber security-related finding documented in Inspection Report 05000458/2015405, "Inspection of Implementation of Interim Cyber Security Milestones 1-7," for in-depth follow-up review. The inspector reviewed a sample of updated program documents and procedures, updated critical digital asset listings, training documents, and corrective action documents.

  The inspector assessed the licensee's completed corrective actions. The inspector verified that the licensee appropriately prioritized the corrective actions and that these actions were adequate to correct the conditions.

These activities constitute completion of two annual follow-up samples, as defined in Inspection Procedure 71152.

b. Findings

Introduction. The inspectors reviewed multiple examples of a self-revealing, Green, non-cited violation of Technical Specification 3.0.4, "Limiting Condition for Operation Applicability," for the licensee's failure to restore safety-related equipment to operable status prior to changing modes. Specifically, the licensee failed to restore Division I of the CRFA system to operable status prior to entering Mode 2 on March 8, 2017, and again on March 11, 2017.

Description. On April 5, 2017, the station performed Procedure STP-740-3002, "Control Building Envelope Tracer Gas Test." The test was not performed satisfactorily due to an unexpected low flow rate through the charcoal filter train. Technical Specification (TS) 3.7.2 requires two CRFA subsystems to be operable in Modes 1, 2, and 3. The station declared the Division I CRFA system inoperable and appropriately entered the 7-day shutdown action statement associated with TS Limiting Condition for Operation (LCO) 3.7.2 Condition A, which requires the licensee to restore the CRFA subsystem to an operable status within seven days. On April 6, 2017, the station performed Procedure STP-402-4501, "Control Room Fresh Air Flow Rate Test Division I." The test found that measured flow was lower than the acceptance criteria. The station conducted a Failure Modes and Effects Analysis and determined manual volume damper HVC-DMP4A was not in the correct position. Station personnel found the damper in a nearly closed position, which caused low air flow through the CRFA system and resulted in two failed surveillance tests. The licensee repositioned damper HVC-DMP4A and successfully conducted surveillance testing.

The licensee's apparent cause analysis (ACA), which was documented in Condition Report CR-RBS-2017-03082, concluded that mechanical maintenance personnel did not have adequate procedural guidance for properly positioning damper HVC-DMP4A. Damper HVC-DMP4A was repositioned from closed to open on March 4, 2017, following troubleshooting associated with engineering modifications to control building and control room heating, ventilation, and air conditioning systems. Damper HVC-DMP4A was positioned to open without any guidance: no work order or procedure was generated or used, and torque specifications were not referenced when damper HVC-DMP4A was positioned to open. The vendor manual associated with damper HVC-DMP4A specifies a torque requirement of 29 foot-pounds.

Upon review of main control room log data, the inspectors determined that the station entered Mode 2 following a refueling outage on March 8, 2017, with the Division I CRFA system inoperable. On March 10, 2017, the station initiated a manual scram due to a steam leak in the turbine building. The plant restarted on March 11, 2017, with the Division I CRFA system inoperable.

Analysis. The failure to restore Division I of the CRFA system to operable status prior to entering Mode 2 was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the structures, systems, and components (SSC) and barrier performance attribute of the Barrier Integrity Cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Specifically, the incorrect positioning of damper HVC-DMP4A resulted in inadequate air flow through Division I of the CRFA and rendered it inoperable. The inspectors screened the finding in accordance with NRC Inspection Manual Chapter 0609, "Significance Determination Process." Using NRC Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 3 – "Barrier Integrity Screening Questions," the inspectors determined that the finding was of very low safety significance (Green) because it only represented a degradation of the radiological barrier function provided for the control room. This finding had a cross-cutting aspect in the area of human performance, challenge the unknown, because individuals did not stop when faced with uncertain conditions. Specifically, workers positioned damper HVC-DMP4A without work instructions or specified torque values [H.11].

Enforcement. Technical Specification 3.0.4, "Limiting Condition for Operation Applicability," requires, in part, that when an LCO is not met, entry into a mode in which the LCO is applicable shall only be made when the associated actions to be entered permit continued operation in the mode for an unlimited period of time. LCO 3.7.2, which requires two CRFA subsystems to be operable, is applicable in Modes 1, 2, and 3. Contrary to the above, on March 8, 2017, and March 11, 2017, with LCO 3.7.2 not met, the licensee entered Mode 2 when the associated actions to be entered did not permit continued operation in Mode 2 for an unlimited period of time. Specifically, one CRFA subsystem was inoperable, and associated Actions A.1 and C.1 did not permit continued operation in Mode 2 for an unlimited period of time. The licensee entered this condition into their corrective action program as Condition Report CR-RBS-2017-03082. The licensee restored compliance by properly positioning damper HVC-DMP4A and restoring the Division I CRFA system to an operable status. Because this violation was of very low safety significance (Green) and was entered into the licensee's corrective action program as Condition Report CR-RBS-2017-03082, it is being treated as a non-cited violation consistent with Section 2.3.2.a of the NRC Enforcement Policy: NCV 05000458/2017002-01, "Failure to Maintain Operability of the Division I Control Room Fresh Air System While Changing Reactor Modes."

4OA3 Follow-up of Events and Notices of Enforcement Discretion (71153)

.1 (Closed) Licensee Event Report (LER) 050458/2016-003-01, "Operations Prohibited by Technical Specifications Due to Reactor Control Blade Drift During Core Alterations"

a. Inspection Scope

On January 19, 2016, while conducting core alterations, the main control room received an alarm indicating that a reactor control rod had drifted out of the fully inserted position. At the time, a fuel bundle was being raised out of the core, and the control rod in the same cell drifted out one notch without a corresponding "withdraw" command present. This condition actuated a corresponding alarm on the refueling platform, and system interlocks stopped the platform hoist with the partially withdrawn fuel bundle. After a detailed assessment of the situation, the fuel bundle and control rod 16-53 were returned to their original positions. The drive mechanism for the control rod was disabled, and the control rod remained fully inserted for the remainder of the fuel cycle. The event was caused by the development of a bulge in one or more wings on the affected control rod that caused sufficient friction to support the rod without the collet fingers in the drive mechanism engaged. Based on industry experience and vendor recommendations, the station replaced a total of 18 control rods of the same model and similar boron-10 depletion rates as part of an extent of condition corrective action.

Technical Specification 3.3.1.1, "RPS Instrumentation," requires three channels per trip system for the intermediate range monitor function to be operable when in Mode 2 or in Mode 5 with any control rod withdrawn from a core cell containing one or more fuel assemblies. When control rod 16-53 drifted out one notch, all rods were not fully inserted, and three channels per trip system for the intermediate range monitor function were not operable since required surveillance testing had not occurred to verify operability. The failure to perform surveillance testing of intermediate range monitors prior to withdrawing a control rod in Mode 5 was a performance deficiency. The performance deficiency was of minor safety significance because the one step

withdrawal of control rod 16-53 did not adversely affect the Barrier Integrity Cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, River Bend Station Technical Specifications require that adequate shutdown margin exist at all times. One of the base assumptions in the shutdown margin calculation is that the control rod with the highest reactivity is fully withdrawn. The one step withdrawal of control rod 16-53 was bounded by this assumption and did not adversely affect the assumptions of the shutdown margin calculation. The licensee restored compliance by returning the control rod to the fully inserted position. This failure to comply with Technical Specification 3.3.1.1 constitutes a minor violation that is not subject to enforcement action in accordance with the NRC Enforcement Policy.
LER 05000458/2016-003-01 is closed.

b. Findings

No findings were identified.

.2 (Closed) LER 05000458/2017-001-00, "Operations Prohibited by Technical Specifications (Conduct of Operations with a Potential to Drain the Reactor Vessel with Primary Containment Open)"

a. Inspection Scope

During a refueling outage that commenced on January 28, 2017, there were occasions during which maintenance was performed without taking the required actions to comply with the applicable technical specifications. Specifically, operations with a potential to drain the reactor vessel were conducted without establishing primary containment integrity, and the provisions of NRC Enforcement Guidance Memorandum 11-003, Revision 3, were invoked instead. Provisions included maintaining refueling cavity water level greater than 23 feet above the reactor pressure vessel flange, maintaining high pressure core spray system available for inventory makeup, minimizing the size of the allowable drainage path to maintain time-to-draindown at greater than 24 hours, and establishing two independent means of monitoring reactor cavity water level.

All activities were completed with no transients in reactor cavity water level. On December 20, 2016, the NRC approved a generic technical specification amendment that can be used by licensees to reconcile the condition. The enforcement guidance memorandum requires applicable licensees to submit a request for the amendment by December 20, 2017. River Bend Station is preparing a license amendment request to incorporate this technical specification change. LER 05000458/2017-001-00 is closed.

b. Findings

No findings were identified.

.3 (Closed) LER 05000458/2017-002-01, "Loss of Safety Function of Onsite Electrical Distribution Due to Malfunction of Control Building HVAC System"

a. Inspection Scope

On February 18, 2017, with a refueling outage in progress, operators attempted to swap the running division of the main control building ventilation system from Division II to Division I. After the swap, operators noted that air flow in the control room was abnormally low. Approximately 4 minutes later, the Division I "C" chiller tripped. Operators attempted to restore a Division II chiller to service but were unsuccessful. The station therefore entered the abnormal operating procedure for loss of control building ventilation and declared electrical distribution systems in the control building inoperable due to loss of ventilation.

The licensee subsequently discovered that the damper for the Division II control room air handling unit had failed to properly shut during the evolution. As a consequence, the running Division I control room air handling unit recirculated air back through the discharge line of the Division II control room air handling unit, causing the observed reduction in ventilation flow to the control room as well as the trip of the Division I "C" chiller. The licensee was able to close the damper and restore ventilation flow to the control room by removing the damper's control power fuse.

The inspectors reviewed the LER and determined that the report adequately summarized the event. LER 05000458/2017-002-01 is closed.

b. Findings

Introduction. The inspectors reviewed a self-revealing, Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to correctly translate the design basis into plant specifications. Specifically, the licensee implemented a breaker design in the control building air conditioning system that allowed a single failure of one train of the system to render the other train inoperable, contrary to the design basis. The licensee entered this condition into their corrective action program as Condition Report CR-RBS-2017-01740.

Description. The control building ventilation system at River Bend Station contains a main control room air conditioning subsystem that cools the control room and a standby switchgear room air conditioning subsystem that cools vital equipment rooms in the control building. By design, each of these subsystems is required to be capable of providing air conditioning to its associated spaces under emergency conditions on the assumption of a single failure of any one active component. The station satisfies this design requirement through the use of divisional separation. Each subsystem contains two redundant divisions of equipment, both of which are independently capable of providing air conditioning under accident scenarios.

The main control room air conditioning subsystem contains two air handling units, HVC-ACU1A and HVC-ACU1B, powered by the Division I and Division II safety-related electrical busses, respectively. Similarly, the standby switchgear room air conditioning subsystem contains two air handling units, HVC-ACU2A and HVC-ACU2B, also powered by the Division I and Division II safety-related electrical busses, respectively. The air handling units work by drawing in air from the spaces and blowing it across coils (which

are cooled by refrigerant units powered by the same division) back into the spaces. To prevent recirculation backflow from the running air handling unit through the ventilation ducting of the idle unit, each air handling unit has an inlet and an outlet damper that is designed to close whenever the circuit breaker for that air handling unit is open.

In April of 2007, the licensee changed out the circuit breakers for control room air handling units HVC-ACU1A, HVC-ACU1B, HVC-ACU2A, and HVC-ACU2B, switching from a General Electric (GE) type AKR model to a Nuclear Logistics Incorporated (NLI) Masterpact model. To fit the smaller Masterpact circuit breakers into the spaces of the larger GE AKR breakers, the licensee procured and installed cradle assemblies with mechanism operated contact (MOC) linkages. These linkages mechanically translated the position of the air handling unit breakers into the positions of contacts that controlled the inlet and outlet dampers.

In February of 2017, with the plant shut down in a refueling outage, the licensee attempted to swap the control building ventilation system from Division II to Division I. In the swap, air handling unit HVC-ACU1B, which had been in service, was secured, and air handling unit HVC-ACU1A automatically started, consistent with system design. After a few minutes, control room operators noticed a lack of normal air flow in the space. Shortly thereafter, the running Division I refrigerant unit HVK-CHL1C and the running control room air handling unit HVC-ACU1A both tripped, causing a loss of air conditioning to the control room and the entire control building. After an initial unsuccessful attempt to restart HVK-CHL1C and HVC-ACU1A, the licensee successfully swapped back to Division II.

During initial troubleshooting, the licensee noticed that even though HVC-ACU1B had been secured, control room indication showed it as running. The licensee subsequently determined that this was because an improperly sized screw in the MOC linkage for the associated breaker had fallen out during the swap, causing the breaker control logic to incorrectly signal that the breaker was closed and that the unit was running. With the breaker appearing closed to the breaker control logic, the dampers for the air handling unit stayed open. Consequently, air flow from the running air handling unit HVC-ACU1A recirculated through HVC-ACU1B, depriving flow to the control room and ultimately causing the running refrigerant unit, HVK-CHL1C, to trip on a lack of sufficient heat loading.

Upon investigation, the licensee discovered that a similar failure of an MOC linkage in a Masterpact breaker had occurred at the plant in 2012, during surveillance testing on the standby gas treatment system. That event demonstrated that the failure mechanism was credible and capable of occurring during breaker operations. The licensee's extent of condition review did not include a review of the potential impacts that the vulnerability might have on other Masterpact breakers in the plant; therefore, the vulnerability in the air handling units did not get assessed or corrected.

The event revealed that, under the existing design of both the main control room air conditioning subsystem and the standby switchgear room air conditioning subsystem, a single failure in a component of a breaker for the air handling unit of one division in the subsystem had the potential to cause a complete loss of both divisions of the subsystem, contrary to the design basis. The licensee corrected the condition by implementing a modification to the air handling units on both subsystems designed to

ensure that the dampers for the air handling units would not remain open on any single active failure of a component.

Analysis. The failure to correctly translate the design basis into plant specifications was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the design control attribute of the 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. Specifically, the licensee's failure to implement an appropriate design in the main control room and standby switchgear room air conditioning subsystems adversely affected the availability, reliability, and capability of safety-related components that rely on those subsystems for cooling. The inspectors performed the initial significance determination using NRC Inspection Manual Chapter 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions." The finding required a detailed risk evaluation because it involved a loss of system and/or function. A Region IV senior reactor analyst performed a detailed risk evaluation for the issue.

The analyst assumed that the deficiency would have caused a loss of both air handling units HVC-ACU1A and HVC-ACU1B during any demand over the past year. The basic events were treated as failures with the potential for common cause failures on air handling units HVC-ACU2A and HVC-ACU2B. The analyst ran River Bend SPAR model, Version 8.50, on SAPHIRE, Version 8.1.5, to obtain an estimate of the increase in core damage frequency of 8.5E-8 per year due to the loss of air conditioning in the control building. Dominant initiators were transient and loss of offsite power events which were mitigated by manual actions to open doors on a loss of air conditioning to the control building. The impact of the loss of control room cooling was estimated to result in an increase in core damage frequency of less than 3.2E-7 per year, based on data obtained from NRC Inspection Report 05000458/2016008. This estimate included the effects of external events. Large early release frequency was reviewed and determined not to be a significant risk contributor. The total increase in core damage frequency of the performance deficiency was less than 4.1E-7 per year, making the issue of very low safety significance (Green). No cross-cutting aspect was assigned because the finding did not reflect current performance.

Enforcement. Title 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requires, in part, that measures shall be established to assure that the design basis for those structures, systems, and components to which Appendix B applies is correctly translated into specifications, drawings, procedures, and instructions. Contrary to the above, from April 4, 2007, through February 18, 2017, the licensee failed to assure that the design basis was correctly translated into specifications for the main control room and standby switchgear room air conditioning subsystems. Specifically, the licensee implemented a breaker design containing specifications that allowed a single failure of an active component in the breaker for one division in a subsystem to render both divisions of that subsystem inoperable, contrary to design basis requirements associated with single component failures. The licensee restored compliance by implementing modifications to the affected breakers designed to eliminate the single failure vulnerability. Because this violation was of very low safety significance (Green) and was entered into the licensee's corrective action program as Condition Report CR-RBS-2017-01740, it is being treated as a non-cited violation consistent with Section 2.3.2.a of the NRC Enforcement Policy:

NCV 05000458/2017002-02, “Single Component Failure Leads to Loss of Both Divisions of Control Building Air Conditioning.”

.4 (Closed) LER 05000458/2017-005-00, “Operations Prohibited by Technical Specifications Due to Inoperable Main Control Room Filter Train”

a. Inspection Scope

On April 6, 2017, the station conducted surveillance test STP-402-4501, “Control Room Fresh Air Flow Rate Test Division I.” The test found that measured flow was lower than the acceptance criteria. The station conducted a Failure Modes and Effects Analysis and determined manual volume damper HVC-DMP4A was not in the correct position. Station personnel found the damper in a nearly closed position which caused low air flow through the Control Room Fresh Air (CRFA) system and resulted in failed surveillance tests. The licensee repositioned damper HVC-DMP4A and successfully conducted surveillance testing. During the period of time when HVC-DMP4A was closed, Division I CRFA system was inoperable. With Division I CRFA system inoperable, the plant conducted a plant startup on March 8, 2017, and again on March 11, 2017. Changing reactor modes during a plant startup with Division I CRFA system inoperable is a condition prohibited by technical specifications. LER 05000458/2017-005-00 is closed.

b. Findings

The finding associated with this LER is discussed in Section 4OA2.3 of this report.

These activities constitute completion of four event follow-up samples, as defined in Inspection Procedure 71153.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On May 3, 2017, the inspector presented the cyber security inspection results to Mr. W. Maguire, Site Vice President, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors did not review any proprietary information.

On May 26, 2017, the inspector presented the results of the onsite inspection of the licensee’s ANS, ERO staffing and augmentation, and performance indicator verification pertaining to emergency preparedness to Mr. M. Chase, Director, Regulatory and Performance Improvement, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

On June 22, 2017, the inspector presented the results of the onsite inspection of the licensee’s emergency preparedness maintenance to Mr. W. Maguire, Site Vice President, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

On July 13, 2017, the inspectors presented the integrated inspection results to Mr. W. Maguire, Site Vice President, and other members of the licensee staff. The licensee acknowledged the

issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

D. Burnett, Director, Emergency Planning, Entergy South
M. Chase, Director, Regulatory & Performance Improvement
B. Cole, Corporate Radiation Protection
R. Conner, Manager, Nuclear Oversight
R. Cook, Manager, Security
K. Crissman, Senior Manager, Production
D. Durocher, Supervisor, Code Program
D. Fletcher, Manager, Supply Chain
B. Ford, Senior Manager, Fleet Regulatory Assurance
J. Henderson, Manager, Systems & Components Engineering
R. Hite, Supervisor, Radiation Protection
K. Huffstatler, Senior Licensing Specialist, Regulatory Assurance
J. Hurst, Manager, Emergency Preparedness
C. King, Superintendent, Maintenance Support
R. Leasure, Superintendent, Radiation Protection
P. Lucky, Manager, Performance Improvement
W. Maguire, Site Vice President
J. O'Connor, Senior Manager, Maintenance
S. Peterkin, Manager, Radiation Protection
J. Reynolds, Manager, Operations
W. Runion, Senior Manager, Site Projects and Maintenance Services
D. Sandlin, Manager, Design & Program Engineering
T. Schenk, Manager, Regulatory Assurance
K. Stupak, Manager, Training
S. Vazquez, Director, Engineering
T. Venable, Assistant Manager, Operations
S. Vercelli, General Manager, Plant Operations
J. Vukovics, Supervisor, Reactor Engineering
J. Wilson, Manager, Chemistry

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000458/2017002-01	NCV	Failure to Maintain Operability of the Division I Control Room Fresh Air System While Changing Reactor Modes (Section 4OA2.3)
05000458/2017002-02	NCV	Single Component Failure Leads to Loss of Both Divisions of Control Building Air Conditioning (Section 4OA3.3)

Closed

05000458/2016-003-01	LER	Operations Prohibited by Technical Specifications Due to Reactor Control Blade Drift During Core Alterations (Section 4OA3.1)
05000458/2017-001-00	LER	Operations Prohibited by Technical Specifications (Conduct of Operations with a Potential to Drain the Reactor Vessel with Primary Containment Open) (Section 4OA3.2)
05000458/2017-002-01	LER	Loss of Safety Function of Onsite Electrical Distribution Due to Malfunction of Control Building HVAC System (Section 4OA3.3)
05000458/2017-005-00	LER	Operations Prohibited by Technical Specifications Due to Inoperable Main Control Room Filter Train (Section 4OA3.4)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Condition Reports (CRs)

CR-RBS-2015-00798	CR-RBS-2015-07111	CR-RBS-2015-07262	CR-RBS-2015-08651
CR-RBS-2016-03789	CR-RBS-2016-05756	CR-RBS-2016-06587	CR-RBS-2017-00496
CR-RBS-2017-00723	CR-RBS-2017-00883	CR-RBS-2017-02876	

Miscellaneous

Number	Title	Date
RBG-46554	Response to Generic Letter 06-02, Grid Reliability and the Impact on Plant Risk and the Operability of Offsite Power	April 3, 2006

Procedures

Number	Title	Revision
AOP-0029	Severe Weather Operation	038
EN-FAP-EP-10	Severe Weather Response	005

Procedures

Number	Title	Revision
ENS-DC-199	Off Site Power Supply Design Requirements Nuclear Plant Interface Requirements	9
ENS-DC-201	ENS Transmission Grid Monitoring	7
OSP-0031	Log Report – Outside Area	088
OSP-0045	Summer Reliability Equipment Monitoring	010
OSP-0048	Switchyard Transformer Yard and Sensitive Equipment Controls	032

Work Orders (WOs)

WO 00450680	WO 00456394	WO 00457236

Section 1R04: Equipment Alignment

Calculations

Number	Title	Revision
G13.18.12.2-022	River Bend Station – Combustible Loading	005
PN-317	Max Flood Elevations for Moderate Energy Line Cracks in Cat I Structures	01

Condition Reports (CRs)

CR-RBS-2017-00096	CR-RBS-2017-00616	CR-RBS-2017-01691	CR-RBS-2017-02458
CR-RBS-2017-02784	CR-RBS-2017-02845	CR-RBS-2017-03151	CR-RBS-2017-03315

Drawings

Number	Title	Revision
PID-09-10B	Engineering P&I Diagram System 118 Service Water—Normal	47
PID-27-06A	Engineering P&I Diagram System 209 Reactor Core Isolation Cooling	45
PID-27-07A	Engineering P&I Diagram System 204 Residual Heat Removal—LPCI	38

Miscellaneous

Number	Title	Revision
3221.451-000-001	RCIC Pump Installation, Operation, Maintenance, and Instruction Manual	0

Miscellaneous

Number	Title	Revision
3221.452-000-001	RCIC Turbine Instruction Manual	0
3224.110-000-030	Operating and Maintenance Instructions for Reactor Core Isolation Cooling Systems	000

Procedures

Number	Title	Revision
SOP-0031	Residual Heat Removal System (SYS #204)	337
SOP-0035	Reactor Core Isolation Cooling System (SYS #209)	053
SOP-0042	Standby Service Water System (SYS #256)	042

Section 1R05: Fire Protection

Calculation

Number	Title	Revision
G13.18.12.2-022	River Bend Station – Combustible Loading	005

Condition Report (CR)

CR-RBS-2017-03413

Miscellaneous

Number	Title	Revision
EN-TQ-125	Fire Brigade Drills	1
EN-TQ-125, Attachment 9.1	Fire Drill Scenario	4

Procedures

Number	Title	Revision
AB-070-501	LPCS Pump Room Fire Area AB-6/Z-1	4
AB-070-503	RCIC Pump Room Fire Area AB-4/Z-1 and Z-2	4
RB-141-008	SLC Area Fire Area RC-4/Z-4	3
SP-118-450	Standby Cooling Tower Pump A Room Fire Area PH-1/Z-1	3

Section 1R11: Licensed Operator Requalification Program and Licensed Operator Performance

Condition Reports (CRs)

CR-RBS-2017-03629	CR-RBS-2017-03630	CR-RBS-2017-03632	CR-RBS-2017-03633

Miscellaneous

Number	Title	Revision
RSMS-OPS-0565	Simulator Examination Scenario	1

Procedures

Number	Title	Revision
EN-OP-115	Conduct of Operations	019
GOP-0005	Power Maneuvering	328

Section 1R12: Maintenance Effectiveness

Condition Reports (CRs)

CR-RBS-2014-04346	CR-RBS-2016-05208	CR-RBS-2016-06393	CR-RBS-2016-07084
CR-RBS-2016-07273	CR-RBS-2016-07436	CR-RBS-2016-07627	CR-RBS-2016-07665
CR-RBS-2016-07719	CR-RBS-2016-08361	CR-RBS-2016-08578	CR-RBS-2017-00124
CR-RBS-2017-00214	CR-RBS-2017-00283	CR-RBS-2017-00432	CR-RBS-2017-00433
CR-RBS-2017-00520	CR-RBS-2017-00525	CR-RBS-2017-00636	CR-RBS-2017-00674
CR-RBS-2017-00675	CR-RBS-2017-00725	CR-RBS-2017-00849	CR-RBS-2017-00936
CR-RBS-2017-01111	CR-RBS-2017-01153	CR-RBS-2017-01219	CR-RBS-2017-01618
CR-RBS-2017-01670	CR-RBS-2017-01844	CR-RBS-2017-01907	CR-RBS-2017-02453
CR-RBS-2017-02465	CR-RBS-2017-03043	CR-RBS-2017-03233	CR-RBS-2017-03241
CR-RBS-2017-03332	CR-RBS-2017-03403	CR-RBS-2017-03412	CR-RBS-2017-03613
CR-RBS-2017-03920	CR-RBS-2017-04089	CR-RBS-2017-04385	CR-RBS-2017-04394
CR-RBS-2017-04454	CR-RBS-2017-04505	CR-RBS-2017-04737	

Engineering Document

Number	Title	Revision
EC-67936	TMCN to Revise TMOD 64864 Restoration Instructions	000

Miscellaneous

Number	Title	Revision
PMRQ 00032064-02	EJS-SGW1A-ACB02-52XXX Replace Relay	000

Procedures

Number	Title	Revision
EN-DC-203	Maintenance Rule Program	3
EN-DC-204	Maintenance Rule Scope and Basis	4
EN-DC-205	Maintenance Rule Monitoring	6
EN-DC-206	Maintenance Rule (A)(1) Process	3

Work Orders (WOs)

WO 00367582	WO 00367583	WO 00393168	WO 00463138
WO 0052562253			

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Condition Reports (CRs)

CR-RBS-2017-03082	CR-RBS-2017-03084

Procedures

Number	Title	Revision
ADM-0096	Risk Management Program Implementation and On-line Maintenance Risk Assessment	325
EN-WM-104	On Line Risk Assessment	15

Work Orders (WOs)

WO 00447080	WO 52539306	WO 52628233	WO 52628234
WO 52743868			

Section 1R15: Operability Determinations and Functionality Assessments

Calculation

Number	Title	Revision
G13.18.2.3*187	Generic Letter 89-10 Design Basis Review for E22-MOVF023	5

Condition Reports (CRs)

CR-RBS-2014-04327	CR-RBS-2014-04848	CR-RBS-2014-05483	CR-RBS-2017-00432
CR-RBS-2017-04128	CR-RBS-2017-02453	CR-RBS-2017-02465	CR-RBS-2017-02790
CR-RBS-2017-03640			

Drawing

Number	Title	Revision
0221.412-000-017	HPCS MOV F010 and F011 Outline and Assembly Diagram	F

Procedures

Number	Title	Revision
EN-OP-104	Operability Determination	11
STP-203-6305	HPCS Quarterly Pump and Valve Operability	29

Work Order (WO)

WO 52637337

Section 1R18: Plant Modifications

Calculations

Number	Title	Revision
G13.18.10.3-364	Qualification of Pipe Supports for Minimum Flow Lines at Tank A and B	0
G13.18.10.3-367	Qualification of Pipe Supports for Suction Header	0

Drawings

Number	Title	Revision
PID-15-01A	Engineering P&I Diagram System 251 Fire Protection — Water and Engine Pumps	19
PID-15-01B	Engineering P&I Diagram System 251 Fire Protection — Water and Engine Pumps	16

Engineering Documents

Number	Title	Revision
EC-64599	Fire Protection Water System Engineering Change	0
EDS-ME-014	Pipe Stress Analysis and Support Design	14

Procedures

Number	Title	Revision
EN-DC-115	Engineering Change Process	18
EN-DC-128	Fire Protection Impact Reviews	10

Procedures

Number	Title	Revision
EN-DC-343	Underground Piping and Tanks Inspection and Monitoring Program	9
SOP-0037	Fire Protection Water System Operating Procedure (SYS #251)	39

Work Orders (WOs)

WO 00076551	WO 00450307

Section 1R19: Post-Maintenance Testing

Condition Reports (CRs)

CR-RBS-2015-01759	CR-RBS-2016-06393	CR-RBS-2016-07000	CR-RBS-2017-02846
CR-RBS-2017-04108	CR-RBS-2017-04126	CR-RBS-2017-04249	CR-RBS-2017-04780

Drawings

Number	Title	Revision
FSK-27-6A	Reactor Core Isolation Cooling	26
FSK-27-6B	Reactor Core Isolation Cooling	19
FSK-27-6C	Reactor Core Isolation Cooling	17
PID-03-01A	Engineering P&I Diagram System 109 Main Steam	18
PID-27-06A	Engineering P&I Diagram System 209 Reactor Core Isolation Cooling	45

Miscellaneous

Number	Title	Revision
3222.211-000-002A	Main Steam Isolation Valve Instruction Manual	0
3221.451-000-001	Bingham-Williamette Co., RCIC Pump Instruction Manual	0
3221.452-000-001F	RCIC Turbine Instruction Manual	0
3221.452-000-001K	Magnetic Pickups and Proximity Switches for Electric Governors	0
6221.452-000-001	Terry Turbine Controls Guide	0
6221.452-000-002	Terry Turbine Overspeed Device User’s Manual	0

Procedures

Number	Title	Revision
SEP-RBS-IST-1	RBS Inservice Testing Bases Document	6
SOP-0035	Reactor Core Isolation Cooling (SYS #209)	53
STP-000-6606	Section XI Safety and Relief Valve Testing	25
STP-051-0201	RPS – Main Steam Line Isolation Valve Closure Channel Functional Test	13
STP-051-4262	RPS Main Steam Isolation Valve Closure Channel Calibration and LSFT (B21-F022B)	17
STP-109-6802	MSIV Cold Shutdown Full Stroke Operability Test	4
STP-208-3602	B Steam Line MSIVs and Outboard Drain Valve Leak Rate Test and Inboard MSIV Inleakage Test	12
STP-209-6310	RCIC Quarterly Pump and Valve Operability Test	39
STP-309-0202	Division II Diesel Generator Operability Test	326
STP-309-0206	Division I Diesel Generator 184 Day Operability Test	027
STP-309-0207	Division II Diesel Generator 184 Day Operability Test	24
STP-410-6311	Division I Control Building Chilled Water System Pump and Valve Operability Test	019
STP-508-4813	RPS Channel B Response Time Test	6
TSP-0010	RCIC Over Speed Trip Test	302

Work Orders (WOs)

WO 00388762	WO 00398919	WO 00440301	WO 00448738
WO 00458438	WO 00470284	WO 00470689	WO 00476235
WO 52330677	WO 52330679	WO 52619978	WO 52684090
WO 52760462			

Section 1R22: Surveillance Testing

Condition Reports (CRs)

CR-RBS-2014-03509	CR-RBS-2017-00432	CR-RBS-2017-01844	CR-RBS-2017-02453
CR-RBS-2017-02465	CR-RBS-2017-04086	CR-RBS-2017-04090	

Drawings

Number	Title	Revision
PID-27-04A	Engineering P&I Diagram System 203 HPCS System	26

Drawings

Number	Title	Revision
PID-27-06A	Engineering P&I Diagram System 209 Reactor Core Isolation Cooling	45
PID-34-02A	Engineering P&I Diagram System 602 Fuel Pool Cooling	23

Engineering Documents

Number	Title	Revision
EC-53477	Process Revision to Calculation G13.18.140*047 to Determine Leak Rate for HPCS and RCIC Test Return Valves to Ensure Suppression Pool Level Maintained	0
EC-58852	Reply EC for Acceptance Criteria STP-203-6604 RCIC Valve Criteria with RCIC Discharge Pressure Between 60-70 PSIG	0

Miscellaneous

Number	Title	Revision
SDC-209	Reactor Core Isolation Cooling System Design Criteria System Number 209	5
SEP-RBS-IST-1	RBS Inservice Testing Bases Document	6
SEP-RBS-IST-2	RBS Inservice Testing Plan	8

Procedures

Number	Title	Revision
STP-203-6501	HPCS Pump and Valve Operability Test	12
STP-203-6604	HPCS & RCIC Bypass and Test Return Valves to CST 24 Month Leak Rate Test	307
STP-209-6310	RCIC Quarterly Pump and Valve Operability Test	039
STP-209-6800	RCIC Cold Shutdown Valve Operability Test	303
STP-309-0612	Division II Diesel Generator 24 Hour Run	043

Work Orders (WOs)

WO 52609621	WO 52615588	WO 52637337

Section 1EP2: Alert and Notification System Testing

Miscellaneous

Number	Title	Date
	River Bend Station ANS SWS Upgrade Project, FEMA REP-10 Design Report Addendum, Rev. 0	March 1, 2013
	Evaluation of River Bend Station Nuclear Power Plant Alert and Notification System (ANS) Design Report Addendum	April 3, 2013
	River Bend Station Prompt Notification System Design Report	June 1986

Procedure

Number	Title	Revision
EPP-2-701	Prompt Notification System Maintenance and Testing	11, 12, 28, 29, 30, 31

Work Order (WO)

WO 52657722

Section 1EP3: Emergency Response Organization Staffing and Augmentation System

Miscellaneous

Number	Title	Date
	Emergency Communications Testing Records, Test Period 4th Quarter 2015	December 10, 2015
	Emergency Communications Testing Records, Test Period 1st Quarter 2016	April 6, 2016
	Emergency Communications Testing Records, Test Period 2nd Quarter 2016	July 11, 2016
	Emergency Communications Testing Records, Test Period 3rd Quarter 2016	September 22, 2016
	Emergency Communications Testing Records, Test Period 4th Quarter 2016	January 5, 2017
	Emergency Communications Testing Records, Test Period 1st Quarter 2017	April 20, 2017

Procedure

Number	Title	Revision
EIP-2-006	Notifications	44

Section 1EP5: Maintenance of Emergency Preparedness

Condition Reports (CRs)

CR-HQN-2017-00456	CR-RBS-2015-06467	CR-RBS-2015-06659	CR-RBS-2015-07062
CR-RBS-2015-07371	CR-RBS-2016-00166	CR-RBS-2016-02169	CR-RBS-2016-02710
CR-RBS-2016-02737	CR-RBS-2016-05578	CR-RBS-2016-06194	CR-RBS-2016-08552
CR-RBS-2017-00041	CR-RBS-2017-00113	CR-RBS-2017-00317	CR-RBS-2017-00722
CR-RBS-2017-02856	CR-RBS-2017-02992	CR-RBS-2017-04271	WT-RBS-2017-00053

Miscellaneous

Number	Title	Revision/Date
	River Bend Station Emergency Plan	41
Attachment 9.1, 10 CFR 50.54(q)(2) Review	Procedure/Document Number: EPP-2-701, Revision: 029, Title: Prompt Notification System Maintenance and Testing	August 25, 2016
Attachment 9.1, 10 CFR 50.54(q)(2) Review	Procedure/Document Number: EPP-2-701, Revision: 030, Title: Prompt Notification System Maintenance and Testing	September 28, 2016
Attachment 9.1, 10 CFR 50.54(q)(2) Review	Procedure/Document Number: EPP-2-701, Revision: 031, Title: Prompt Notification System Maintenance and Testing	February 28, 2017
Attachment 9.2, 10 CFR 50.54(q) Evaluation	EN-EP-306, Revision 7, Drills and Exercises	June 25, 2015
Attachment 9.2, 10 CFR 50.54(q) Evaluation	EN-EP-310, Revision 4, Emergency Response Organization Notification System	July 16, 2015
File No. G9.20.6.15, Letter No. EP-M-16-007	ERO Team ‘B’ Practice Drill	April 4, 2016
File No. G9.20.6.15, Letter No. EP-M-16-008	ERO Team ‘B’ Dress Rehearsal Drill Report	May 24, 2016

Miscellaneous

Number	Title	Revision/Date
File No. G9.20.6.15, Letter No. EP-M-16-011	ERO Team 'B' Evaluated Exercise Report	July 27, 2016
File No. G9.20.6.15, Letter No. EP-M-15-018	ERO Team 'C' Site Drill	October 12, 2015
File No. G9.20.6.15, Letter No. EP-M-16-018	ERO Team C/D JIC Drill Report	November 17, 2016
File No. G9.20.6.15, Letter No. EP-M-16-020	ERO Team C/D Site Drill Report	November 23, 2016
File No. G9.20.6.15, Letter No. EP-M-16-019	ERO Team A JIC Drill Report	November 17, 2016
File No. G9.20.6.15, Letter No. EP-M-15-022	ERO Team 'D' Site Drill	December 9, 2015
	River Bend Station After Action Report/Improvement Plan, Drill Date – October 28, 2015, Radiological Emergency Preparedness (REP) Program	December 2, 2015
File No. G9.20.6.15, Letter No. EP-M-16-027	2016 Onsite Medical Drill Report	November 29, 2016
File No. G9.20.6.15, Letter No. EP-M-16-028	2016 Owner Controlled Area Notification Drill Report	December 13, 2016
	River Bend Station After Action Report/Improvement Plan, Drill Date – October 26, 2016, Radiological Emergency Preparedness (REP) Program	December 7, 2016
EN-TQ-125, Attachment 9.1	Fire Brigade Drill Report, 4th Quarter 2016 (November 30, 2016)	December 5, 2016
File No. G9.20.6.15, Letter No. EP-M-16-021	ERO Team A Alternate Facility Drill Report	December 2, 2016

Miscellaneous

Number	Title	Revision/Date
KLD TR-860	River Bend Station 2016 Population Update Analysis	September 21, 2016
LO-RLO-2016-0089	Self-Assessment Title: Pre NRC Exercise Focused Self-Assessment, Plant: River Bend Station	April 12, 2016
LO-RLO-2016-0144	Pre NRC Program Inspection Assessment	March 1, 2017
QA-7-2016-RBS-1	Quality Assurance Audit Report	May 9, 2016
	Nuclear Independent Oversight Fleet Report, Report Period: November 2016 – February 2017	March 1, 2017
EN-LI-102	Corrective Action Program	29
Attachment 9.1, 10 CFR 50.54(q)(2) Review	Procedure/Document Number: EPP-2-503, Revision: 4, Title: River Bend Station Equipment Important to Emergency Response	November 10, 2016
Attachment 9.1, 10 CFR 50.54(q)(2) Review	Procedure/Document Number: EPP-2-501, Revision: 17, Title: Emergency Facilities and Equipment Readiness	June 23, 2016
Attachment 9.1, 10 CFR 50.54(q)(2) Review	Procedure/Document Number: EN-EP-310, Revision: 5, Title: Emergency Response Organization Notification System	July 14, 2016
Attachment 9.2, 10 CFR 50.54(q)(2) Evaluation	Procedure/Document Number: EN-EP-306, Revision: 7, Title: Drills and Exercises	June 25, 2015
Attachment 9.2, 10 CFR 50.54(q)(2) Evaluation	Procedure/Document Number: EIP-2-007, Revision: 27, Title: Protective Action Recommendation Guidelines	August 12, 2015
Attachment 9.2, 10 CFR 50.54(q)(2) Evaluation	Procedure/Document Number: EIP-2-001, Revision: 26, Title: Classification of Emergencies	July 30, 2015
CR-RBS-2015-6659	Apparent Cause Evaluation, Green Non-Cited Violation for an Individual who Filled an ERO Position Without All of the Necessary ERO Training	November 30, 2015
Letter No. EP-M-17-002	Training of Offsite Agencies	January 16, 2017
	2016 Director's Meeting, West Feliciana Parish EOC, 1000-1200	November 1, 2016

Miscellaneous

Number	Title	Revision/Date
Letter No. EP-M-16-024	2016 Protected Area Evacuation and Off-Hours Accountability Drill	December 12, 2016
Attachment 9.1, 10 CFR 50.54(q) Screening	Procedure/Document Number: EIP-2-006; Title: Notifications, Revision: 43	December 17, 2015
	Emergency Response Organization, 4th Quarter, Updated: 12/31/2016	123
RDRL-EP-MED 2015	Onsite Medical Drill	0
RDRL-EP-16MS1DRIL	Radiological Emergency Medical Drill Scenario for River Bend Station, Our Lady of the Lake Regional Medical Center, and Acadian Ambulance Service	October 26, 2016
EN-LI-114	Regulatory Performance Indicator Process	7
Letter No. EP-M-10 018	2010 Medical Drill Report	November 8, 2010
FCBT-EP-RESP	Entergy Nuclear Emergency Response Organization (ERO) Responsibilities	6
RDRL-EP-FD01	Focused Drill Scenario	02
RDRL-EP-FD05	Focused Drill Scenario	01
RDRL-EP-1602	Site Drill Scenario	02
RDRL-EP-1600	EP Evaluated Exercise	01
RDRL-EP-1200	Site Drill Scenario	04
	Hospital (MS-1) Drill Report, Our Lady of the Lake Regional Medical Center, 2016 Radiological Emergency Medical Drill	October 26, 2016
	Acadian Ambulance Emergency Medical Service (EMS)/ Ambulance Procedure for Response to Radiological Emergencies at River Bend Station	3
	Emergency Medical Service (EMS)/Ambulance Procedure for Response to Radiological Emergencies	0

Procedures

Number	Title	Revision
EIP-2-001	Classification of Emergencies	026
EIP-2-002	Classification Actions	032
EIP-2-006	Notifications	044
EIP-2-007	Protective Action Recommendation Guidelines	027
EIP-2-012	Radiation Exposure Controls	21
EIP-2-014	Offsite Radiological Monitoring	18
EIP-2-016	Operations Support Center	30
EIP-2-018	Technical Support Center	38
EIP-2-020	Emergency Operations Facility	39
EIP-2-022	Alternate EOF – Activation and Transfer of Functions	31
EIP-2-023	Joint Information Center	14
EIP-2-024	Offsite Dose Calculations	25
EIP-2-026	Evacuation, Personnel Accountability, and Search and Rescue	20
EIP-2-028	Recovery	12
EIP-2-101	Periodic Review of the Emergency Plan	22
EIP-2-103	Emergency Equipment Inventory	21, 23
EN-EP-305	Emergency Planning 10 CFR 50.54(q) Review Program	3, 4
EPP-2-503	River Bend Station Equipment Important to Emergency Response	4
EPP-2-502	Emergency Communications Equipment Testing	26
EN-RP-502	Inspection and Maintenance of Respiratory Protection Equipment	9
RBNP-099	Reporting of Events Involving Loss of Emergency Preparedness Capability	0
EN-EP-308	Emergency Planning Critiques	5
EN-EP-306	Drills and Exercises	8

Procedures

Number	Title	Revision
EN-TQ-110	Emergency Response Organization Training	12
EN-TQ-110-1	Fleet EPlan Training Course Summary	3
	RBS ERO Training Plan	4

Work Orders (WOs)

WO 374723	WO 428862	WO 430799	WO 430802
WO 430948	WO 431095	WO 435234	WO 436703
WO 438809	WO 464059		

Section 1EP6: Drill Evaluation

Miscellaneous

Number	Title	Revision
RSMS-OPS-0565	Simulator Examination Scenario	1

Section 4OA1: Performance Indicator Verification

Condition Report (CR)

CR-RBS-2017-00253

Procedures

Number	Title	Revision
EN-LI-114	Performance Indicator Process	7
NEI 99-02	Regulatory Assessment Performance Indicator Guideline	7

Section 4OA2: Problem Identification and Resolution

Condition Reports (CRs)

CR-RBS-2015-01368	CR-RBS-2015-03031	CR-RBS-2017-00376	CR-RBS-2017-00554
CR-RBS-2017-00683	CR-RBS-2017-01008	CR-RBS-2017-01019	CR-RBS-2017-01041
CR-RBS-2017-01151	CR-RBS-2017-01523	CR-RBS-2017-02291	CR-RBS-2017-02314
CR-RBS-2017-02482	CR-RBS-2017-02546	CR-RBS-2017-02588	CR-RBS-2017-02896
CR-RBS-2017-02897	CR-RBS-2017-03082	CR-RBS-2017-03084	CR-RBS-2017-03862
CR-RBS-2017-04040	HQN-2015-00732	HQN-2015-05031	HQN-2015-05033

Miscellaneous

Number	Title	Revision
	Drawing - RBS Process LAN 05132015	
	Drawing - Badging to SAS	
	Spreadsheet Listing CDAs Identified Post-Completion of MS 1-7 Inspection	
RBG-47653 RBF1-16-0020	Letter from River Bend Station to U.S. Nuclear Regulatory Commission, Subject: Revision 1 of the River Bend Cyber Security Plan	March 15, 2016
SFAQ 16-03	Treatment of Digital Maintenance and Test Equipment	March 8, 2017
SFAQ 16-05	Moving Data between Security Levels	March 7, 2017

Procedures

Number	Title	Revision
EN-FAP-IT-008	Nuclear Cyber Security Training and Awareness	4
EN-IT-103	Nuclear Cyber Security Program	12
EN-IT-103-01	Control of Portable Digital Media Connected to Critical Digital Assets	11
EN-IT-103-03	Cyber Security Assessment Process	3
EN-IT-103-07	Cyber Security Physical Access Requirements for Critical Digital Assets	3
EN-LI-118	Cause Evaluation Process	24
STP-402-4501	Control Room Fresh Air Flow Rate Test Division I	8
STP-740-3002	Control Building Envelope Tracer Gas Test	0

Work Orders (WOs)

WO 00414853 WO 52599495

Section 4OA3: Follow-up of Events and Notices of Enforcement Discretion

Condition Reports (CRs)

CR-RBS-2007-01666	CR-RBS-2009-01939	CR-RBS-2012-03387	CR-RBS-2017-01676
CR-RBS-2017-01702	CR-RBS-2017-01721	CR-RBS-2017-01740	CR-RBS-2017-01848
CR-RBS-2017-01866	CR-RBS-2017-02044	CR-RBS-2017-02214	CR-RBS-2017-02231

Miscellaneous

Number	Title	Revision
SDC 402	Control Building HVAC System Design Criteria System 402	003

Procedure

Number	Title	Revision
AOP-0060	Loss of Control Building Ventilation	15 & 16

Work Orders (WOs)

WO 00468033	WO 00468034	WO 00468460	WO 00468468

Cyber Security Follow-up Document Request

NOTE: If any requested documents are identified as security-related, please notify the lead inspector:

Sam Graves
RIV/DRS/EB2
1600 E. Lamar Blvd.
Arlington, TX 76011

1. Corrective action documents for NRC- and Licensee-identified performance deficiencies described in the Milestones (MS) 1-7 Inspection Report (2015405). Please provide the plant documents that corrected the deficiencies (e.g., revised procedures, work orders, modification packages, new equipment, et cetera).

2. Current Cyber Security Program document(s)

3. Cyber Security program procedures

4. List of contacts with contact information

5. Cyber security group organization chart

6. Diagram of defensive network

7. A list of critical digital assets identified since the last onsite week of the MS 1-7 Inspection

8. A list of Cyber Security Program changes since the MS 1-7 Inspection