UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

April 30, 2015

Mr. R. Michael Glover
Vice President - Robinson Plant
H. B. Robinson Steam Electric Plant
Duke Energy Progress, Inc.
3581 West Entrance Road
Hartsville, South Carolina 29550

SUBJECT: H.B. ROBINSON STEAM ELECTRIC PLANT - NRC INTEGRATED INSPECTION REPORT 05000261/2015001

Dear Mr. Glover:

On March 31, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your H. B. Robinson Steam Electric Plant, Unit 2. On April 15, 2015, the NRC inspectors discussed the results of this inspection with you and other members of your staff. Inspectors documented the results of this inspection in the enclosed inspection report.

NRC inspectors documented one Severity Level IV violation under the traditional enforcement process. This violation was associated with an additional finding of very low safety significance (Green) in this report. This finding involved a violation of NRC requirements. The NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2.a of the Enforcement Policy.

If you contest the violations or significance of the NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II, the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at H. B. Robinson Steam Electric Plant, Unit 2.

In accordance with Title 10 of the *Code of Federal Regulations* 2.390 of the NRC's "Rules of Practice", a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publically Available Records component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

George T. Hopper, Chief
Reactor Projects Branch 4
Division of Reactor Projects

Docket No.: 50-261
License No.: DPR-23

Enclosure:
Inspection Report 05000261/2015001
w/Attachment: Supplemental Information

cc Distribution via Listserv

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Letter to R. Michael Glover from George T. Hopper dated April 30, 2015.

SUBJECT: H. B. ROBINSON STEAM ELECTRIC PLANT - NRC INTEGRATED INSPECTION REPORT 05000261/2015001

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REGION II

Docket No:	50-261
License No:	DPR-23
Report No:	005000261/2015001
Facility:	H. B. Robinson Steam Electric Plant, Unit 2
Location:	3581 West Entrance Road Hartsville, SC 29550
Dates:	January 1, 2015 through March 31, 2015
Inspectors:	K. Ellis, Senior Resident Inspector C. Scott, Resident Inspector M. Meeks, Senior Operations Engineer, 1R11 J. Viera, Operations Engineer, 1R11
Approved by:	George T. Hopper, Chief Reactor Projects Branch 4 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000261/2015001, January 1, 2015, through March 31, 2015; Duke Energy Progress, Inc., H.B. Robinson Steam Electric Plant, Unit 2, Operability Determinations and Functionality Assessments.

The report covered a three-month period of inspection by resident inspectors and regional inspectors. There was one violation and associated finding documented in this report. The significance of inspection findings are indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP) dated June 2, 2011. The cross-cutting aspects are determined using IMC 0310, "Aspects within the Cross-Cutting Areas" dated December 4, 2014. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy dated January 28, 2013. The NRC's program for overseeing the safe operations of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 5.

Cornerstone: Mitigating Systems

- SLIV. The inspectors identified a severity level IV (SLIV) non-cited violation (NCV) of 10 CFR 50.59, "Changes, Tests, and Experiments," for the licensee's failure to obtain a license amendment prior to implementing a change to licensee procedure OST-20, "Shiftly Surveillances." Specifically, a note was added to procedure OST-20 to allow the use of the Emergency Response Facility Information System (ERFIS) as an acceptable alternate method to determine Analog Rod Positon Indication (ARPI) System operability if the position indicators were not indicating properly. This change resulted in an associated Green NCV of Technical Specification (TS) 3.1.7, "Rod Position Indication," for failing to shut down the reactor or follow remedial actions permitted by a TS action requirement when a Limiting Condition for Operation (LCO) was not met. Upon determination that the practice of crediting ERFIS for rod position indication (RPI) operability was not allowed by the current licensing basis (CLB), Standing Instruction 14-023 was issued to suspend the practice and condition report (CR) 720726 was written to document the issue.

  The licensee's failure to obtain a license amendment for a change that resulted in a change to technical specifications incorporated in the license was a performance deficiency. The performance deficiency was determined to be more than minor because it was associated with the mitigating systems cornerstone attribute of procedure quality and adversely affected the objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the procedure change adversely impacted the availability and capability of systems to respond to a design basis event because it allowed the use of a non CLB method for determining rod position after failure of the ARPI system. Rod position indication is required to determine maximum rod misalignment which is an initial assumption in the safety analysis that directly affects core power distributions and assumptions of available shutdown margin. The finding was screened using IMC 0609 Appendix A Exhibit 2.C, Reactivity Control Systems, dated June 19, 2012, and was determined to be of very low safety significance (Green) because the finding did not result in a mismanagement of reactivity by operators. The violation was determined to

be a SLIV violation using the Enforcement Policy example 6.1.d.2, because it resulted in a condition having very low safety significance. No cross-cutting aspect was assigned in association with the ROP finding because the change to the procedure was performed greater than three years ago and did not reflect current licensee performance. (Section 1R15)

REPORT DETAILS

Summary of Plant Status

The unit began the inspection period at 100 percent rated thermal power (RTP) and remained there through the end of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01 – 1 sample)

a. Inspection Scope

.1 Impending Adverse Weather Conditions

The inspectors reviewed the licensee's preparations to protect risk-significant systems from extreme cold weather expected during February 19, and 20, 2015. The inspectors evaluated the licensee's implementation of adverse weather preparation procedures and compensatory measures, including operator staffing, before the onset of and during the adverse weather conditions. The inspectors reviewed the licensee's plans to address the ramifications of potentially lasting effects that may result from cold weather conditions. The inspectors verified that operator actions specified in the licensee's adverse weather procedure maintain readiness of essential systems. The inspectors verified that required surveillances were current, or were scheduled and completed, if practical, before the onset of anticipated adverse weather conditions. The inspectors also verified that the licensee implemented periodic equipment walkdowns or other measures to ensure that the condition of plant equipment met operability requirements. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04 – 3 samples)

a. Inspection Scope

Partial Walkdown

The inspectors verified that critical portions of the selected systems were correctly aligned by performing partial walkdowns. The inspectors selected systems for assessment because they were a redundant or backup system or train, were important for mitigating risk for the current plant conditions, had been recently realigned, or were a single-train system. The inspectors determined the correct system lineup by reviewing plant procedures and drawings. Documents reviewed are listed in the Attachment.

The inspectors selected the following three systems or trains to inspect:

- 'A' Emergency Diesel Generator (EDG) while the 'B' EDG was out-of-service for maintenance
- 'B' Emergency Diesel Generator (EDG) while the 'A' EDG was out-of-service to locate and remove a ground on the DC system
- 'A' and 'B' Motor Driven Auxiliary Feedwater (AFW) pumps while the Steam Driven AFW pump was out-of-service for maintenance

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05Q – 6 samples)

a. Inspection Scope

Quarterly Inspection

The inspectors evaluated the adequacy of selected fire plans by comparing the fire plans to the defined hazards and defense-in-depth features specified in the fire protection program. In evaluating the fire plans, the inspectors assessed the following items:

- control of transient combustibles and ignition sources
- fire detection systems
- water-based fire suppression systems
- gaseous fire suppression systems
- manual firefighting equipment and capability
- passive fire protection features
- compensatory measures and fire watches
- issues related to fire protection contained in the licensee's corrective action program

The inspectors toured the following six fire areas to assess material condition and operational status of fire protection equipment. Documents reviewed are listed in the Attachment.

- 'A' Emergency Diesel Generator Room, fire zone 2
- 'B' Emergency Diesel Generator Room, fire zone 1
- Turbine Building Ground Level, fire zone 25A and 25B
- Pipe Alley, fire zone 11
- North Cable Vault, fire zone 9
- South Cable Vault, fire zone 10

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06 – 1 sample)

a. Inspection Scope

.1 Underground Cables

The inspectors reviewed related flood analysis documents and inspected the areas listed below containing cables whose failure could disable risk-significant equipment. The inspector directly observed the condition of cables and cable support structures and, as applicable, verified that dewatering devices and drainage systems were functioning properly. In addition, the inspectors verified the licensee was identifying and properly addressing issues using the corrective action program. Documents reviewed are listed in the Attachment.

- Unit 2, H569-SA, 'A' EDG Fuel Oil Transfer Pump Electrical Handhole
- Unit 2, H574-SB, 'B' EDG Fuel Oil Transfer Pump Electrical Handhole
- Unit 2, M-50A, South Service Water Electrical Manhole
- Unit 2, M-50B, North Service Water Electrical Manhole
- Unit 2, M-35, Service Water Pump 'A' and 'B'
- Unit 2, M-36, Service Water Pump 'C' and 'D'

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program and Licensed Operator Performance (71111.11 – 3 samples)

a. Inspection Scope

.1 Resident Inspector Quarterly Review of Licensed Operator Requalification

The inspectors observed an evaluated simulator scenario administered to an operating crew conducted in accordance with the licensee's accredited requalification training program. The scenario evaluated the operators' ability to respond to loss of emergency bus E-1, 'A' EDG failure, large break loss of coolant accident, main steam isolation to valve failure to close and a reactor trip.

The inspectors assessed the following:

- licensed operator performance
- the ability of the licensee to administer the scenario and evaluate the operators
- the quality of the post-scenario critique
- simulator performance

Documents reviewed are listed in the Attachment.

.2 Resident Inspector Quarterly Review of Licensed Operator Performance in the Actual Plant/Main Control Room

The inspectors observed licensed operator performance in the main control room during surveillance testing of the 'A' motor driven AFW pump.

The inspectors assessed the following:

- use of plant procedures
- control board manipulations
- communications between crew members
- use and interpretation of instruments, indications, and alarms
- use of human error prevention techniques
- documentation of activities
- management and supervision

Documents reviewed are listed in the Attachment.

.3 Licensed Operator Requalification - Biennial

The inspectors reviewed the facility operating history and associated documents in preparation for this inspection. During the week of March 2-6, 2015, the inspectors reviewed documentation, interviewed licensee personnel, and observed the administration of operating tests associated with the licensee's operator requalification program. Each of the activities performed by the inspectors was done to assess the effectiveness of the facility licensee in implementing requalification requirements identified in 10 CFR Part 55, "Operators' Licenses." The evaluations were also performed to determine if the licensee effectively implemented operator requalification guidelines established in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," and described in Inspection Procedure (IP) 71111.11, "Licensed Operator Requalification Program." The inspectors also evaluated the licensee's simulation facility for adequacy for use in operator licensing examinations using ANSI/ANS-3.5-2009, "American National Standard for Nuclear Power Plant Simulators for Use in Operator Training and Examination." The inspectors observed five crews during the performance of the operating tests. Documentation reviewed included written examinations, Job Performance Measures (JPMs), simulator scenarios, licensee procedures, on-shift records, simulator modification request records, simulator performance test records, operator feedback records, licensed operator qualification records, remediation plans, watchstanding records, and medical records. The records were inspected using the criteria listed in IP 71111.11. Documents reviewed during the inspection are documented in the List of Documents Reviewed.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12 – 2 samples)

a. Inspection Scope

The inspectors assessed the licensee's treatment of the two issues listed below to verify the licensee appropriately addressed equipment problems within the scope of the maintenance rule (10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants"). The inspectors reviewed procedures and records to evaluate the licensee's identification, assessment, and characterization of the problems as well as their corrective actions for returning the equipment to a satisfactory condition. The inspectors also interviewed system engineers and the maintenance rule coordinator to assess the accuracy of performance deficiencies and extent of condition. Documents reviewed are listed in the Attachment.

- Unit 2, Containment Purge System Performance History
- CR 726611, Emergency Operations Facility/Technical Support Center/Security diesel fuel oil day tank electronic control module will not function

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 – 5 samples)

a. Inspection Scope

The inspectors reviewed the five maintenance activities listed below to verify that the licensee assessed and managed plant risk as required by 10 CFR 50.65(a)(4) and licensee procedures. The inspectors assessed the adequacy of the licensee's risk assessments and implementation of risk management actions. The inspectors also verified that the licensee was identifying and resolving problems with assessing and managing maintenance-related risk using the corrective action program. Additionally, for maintenance resulting from unforeseen situations, the inspectors assessed the effectiveness of the licensee's planning and control of emergent work activities. Documents reviewed are listed in the Attachment.

- 01/19 to 01/25 'B' Train Work Week - 'B' EDG out-of-service for 2-year maintenance fragnet
- 1/26 to 2/01 'B' Work Train – 'A' and 'B' trains of the DC Electrical system out of service due to the reactor protection system being cross connected
- Emergent Yellow condition for both EDG's OOS
- A review of risk management during elevated grid reliability concerns due to extreme low temperatures
- 3/16 to 3/22 'A' Train Work Week – Yellow Risk condition due to Motor Driven Fire pump out-of-service

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15 – 10 samples)

a. Inspection Scope

The inspectors selected the ten operability determinations or functionality evaluations listed below for review based on the risk-significance of the associated components and systems. The inspectors reviewed the technical adequacy of the determinations to ensure that technical specification operability was properly justified and the components or systems remained capable of performing their design functions. To verify whether components or systems were operable, the inspectors compared the operability and design criteria in the appropriate sections of the technical specification and updated final safety analysis report to the licensee's evaluations. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. Additionally, the inspectors reviewed a sample of corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with operability evaluations. Documents reviewed are listed in the Attachment.

- Unsatisfactory surveillance due to mechanical test equipment out of tolerance, CR 728030
- Analog Rod Position Indicator out of service, CR 695121
- DC Ground Discovered in the EDG A TS-4525A Coolant Low Temp, CR 730632
- Contactor for HVE-17, EDG Room Exhaust failed its preventative maintenance test, CR 728156
- Ultra-sound test for Feedwater Pipe due to External Corrosion, CR 734330
- Ground Alarms on Both trains of DC, CR 729260
- Cracks in Turbine Building Masonry Block Wall 13 Noted, CR 718536
- Seismic Monitor Alarm Setting, CR 734329
- Pressurizer PORV Limit Switches EQ Calculated Qualified Life, CR 738953
- Limit Switches for Containment Purge Valves exceeded recommended life, CR 738591

b. Findings

Introduction: The inspectors identified a SLIV NCV of 10 CFR 50.59, "Changes, Tests, and Experiments," for the licensee's failure to obtain a license amendment prior to implementing a change to licensee procedure OST-20, "Shiftly Surveillances." Specifically, a note was added to procedure OST-20 to allow the use of ERFIS as an acceptable alternate method for determining ARPI system operability if the position indicators were not indicating properly. This change resulted in an associated Green NCV of TS 3.1.7, "Rod Position Indication," for failing to shut down the reactor or follow remedial actions permitted by a TS action requirement when a Limiting Condition for Operation (LCO) was not met.

Description: On November 26, 1997, the licensee approved a procedure change to procedure OST-20, “Shiftly Surveillance.” The change to procedure OST-20 added a note to provide an alternate method for compliance with TS LCO 3.1.7 for RPI. Specifically, the note stated that the use of ERFIS is an acceptable alternate method for determining ARPI system operability in accordance with TS if the normal position indicators were not indicating properly. This change to TS was not approved by the NRC and was not part of the licensee’s CLB. Since this change involved a change to TSs incorporated in the license, a license amendment pursuant to 10 CFR 50.90 would be required to permit the use of ERFIS information to satisfy the TS LCO requirement.

On June 26, 2014, the RPI for a control rod failed, meeting the entry criteria for TS LCO 3.1.7 Condition A, one ARPI per group inoperable for one or more groups. In lieu of entering the TS LCO for an inoperable control rod indication, the operators relied solely on the ERFIS, per procedure OST-20, to determine rod position. On June 30, 2014, the ARPI was returned to service and compliance was restored with TS 3.1.7 following replacement of a failed signal conditioner. When the RPI was returned to service, it was determined that the control rod had not moved.

TS 3.1.7 Required Actions A.1 or A.2 for one RPI inoperable required the determination of the affected rod’s position using the incore detector system or to reduce power to less than 50 percent RTP. Either of these actions was required to be completed within eight hours upon discovery of the failed RPI. Failing to satisfy Condition A required entry into Condition D which was to be in Mode 3 within 6 hours. Since the RPI Indicator issue was not resolved within the allowed completion times for Conditions A and D, a violation of TS 3.1.7 occurred.

Upon determination that the practice of crediting ERFIS for RPI operability was not allowed by the CLB, Standing Instruction 14-023 was issued to suspend this practice and CR 720726 was written to document this issue.

Analysis: The licensee’s failure to obtain a license amendment for a change that resulted in a change to TSs incorporated in the license was a performance deficiency. The performance deficiency was determined to be more than minor because it was associated with the mitigating systems cornerstone attribute of procedure quality and adversely affected the objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the procedure change adversely impacted the availability and capability of systems to respond to a design basis event because it allowed the use of a non-CLB method for determining rod position after failure of the ARPI system. Rod position indication is required to determine maximum rod misalignment which is an initial assumption in the safety analysis that directly affects core power distributions and assumptions of available shutdown margin. Violations of 10 CFR 50.59 are considered to be violations that potentially impede or impact the regulatory process, therefore, they are dispositioned using the traditional enforcement process. The licensee’s failure to obtain NRC approval prior to implementing the change to a procedure that changes technical specifications was determined to impact the regulatory process.

This violation is associated with a finding that has been evaluated by the SDP and communicated with an SDP color reflective of the safety impact of the deficient licensee performance. The SDP, however, does not specifically consider the regulatory process impact. Thus, although related to a common regulatory concern, it is necessary to address the violation and finding using different processes to correctly reflect both the regulatory importance of the violation and the safety significance of the associated finding.

The finding was screened using IMC 0609 Appendix A Exhibit 2.C, Reactivity Control Systems, dated June 19, 2012, and was determined to be of very low safety significance (Green) because the finding did not result in a mismanagement of reactivity by operators. The violation was determined to be a SLIV violation using the Enforcement Policy example 6.1.d.2, because it resulted in a condition having very low safety significance. No cross-cutting aspect was assigned in association with the ROP finding because the change to the procedure was performed greater than three years ago and did not reflect current licensee performance.

Enforcement: Title 10 of the CFR Part 50.59(c)(1) states, in part that the licensee may make a change in the facility as described in the final safety analysis report without obtaining a license amendment pursuant to 10 CFR Part 50.90 only if a change to the TSs incorporated in the license is not required.

Contrary to the above, on November 26, 1997, the licensee failed to obtain a license amendment prior to implementing a change that resulted in a change to TSs. Specifically, the change to procedure OST-20, “Shiftly Surveillances,” allowed the use of the ERFIS to determine the rod positions in lieu of the required TS actions. This procedure change was used by the operators to make an operability determination which resulted in the ARPI subcomponent of the required RPI function of TS 3.1.7 to become inoperable on June 26, 2014, for approximately four days. On June 30, 2014, the ARPI was returned to service and compliance was restored with TS 3.1.7 following replacement of a failed signal conditioner. When the RPI was returned to service, it was determined that the control rod had not moved.

In accordance with the NRC Enforcement Policy, the violation was classified as a SLIV violation because the underlying technical issue was of very low risk significance and because of the cause and effect relationship between the initial 10 CFR 50.59 violation and the subsequent TS 3.1.7 violation, a single NCV will be issued in accordance with Enforcement Manual Section 1.3.5, Documenting Related Violations. Because this violation was of very low safety significance, was not repetitive or willful, and was entered in the licensee’s corrective action program as CR 720726, this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy; NCV 05000261/2015001-01, “Inadequate 10 CFR 50.59 Evaluation Results in RPI System Inoperability.”

1R18 Plant Modifications (71111.18 – 2 samples)

a. Inspection Scope

The inspectors verified that the two plant modifications listed below did not affect the safety functions of important safety systems. The inspectors confirmed the modifications did not degrade the design bases, licensing bases, and performance capability of risk significant structures, systems and components. The inspectors also verified modifications performed during plant configurations involving increased risk did not place the plant in an unsafe condition. Additionally, the inspectors evaluated whether system operability and availability, configuration control, post-installation test activities, and changes to documents, such as drawings, procedures, and operator training materials, complied with licensee standards and NRC requirements. In addition, the inspectors reviewed a sample of related corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with modifications. Documents reviewed are listed in the Attachment.

- EC 97151, Reconciliation of EDG Fuel Oil Cloud Point Parameter with the Current Licensing Basis
- EC 98086, Dedicated Shutdown Diesel Generator (DSDG) Motor Operated Potentiometer (MOP) Replacement

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 – 6 samples)

a. Inspection Scope

The inspectors either observed post-maintenance testing or reviewed the test results for the six maintenance activities listed below to verify the work performed was completed correctly and the test activities were adequate to verify system operability and functional capability.

- WO 13480331, EDG-B output breaker circuit testing following output breaker switch replacement
- WO 13490620, OST-902-2, Containment Fan Coolers Component Test ‘B’ Train following replacement of breaker contact for V6-33C, Service Water Booster pump ‘B’ supply to HVH-3
- WO 13410386, OST-401-1, EDG ‘A’ Slow Speed Start following replacement of EDG undervoltage relay
- WO 13474103, EST-159, DSDG MOP Set-up and Testing following MOP Replacement
- WO 13473756, OST-910, DSDG monthly testing following output breaker replacement
- WO 13474938-01, OST-409-2, ‘B’ EDG fast start following maintenance fragnet

The inspectors evaluated these activities for the following:

- Acceptance criteria were clear and demonstrated operational readiness.
- Effects of testing on the plant were adequately addressed.
- Test instrumentation was appropriate.
- Tests were performed in accordance with approved procedures.
- Equipment was returned to its operational status following testing.
- Test documentation was properly evaluated.

Additionally, the inspectors reviewed a sample of corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with post-maintenance testing. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 – 4 samples)

a. Inspection Scope

The inspectors reviewed the four surveillance tests listed below and either observed the test or reviewed test results to verify testing adequately demonstrated equipment operability and met technical specification and licensee procedural requirements. The inspectors evaluated the test activities to assess for preconditioning of equipment, procedure adherence, and equipment alignment following completion of the surveillance. Additionally, the inspectors reviewed a sample of related corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with surveillance testing. Documents reviewed are listed in the Attachment.

Routine Surveillance Tests

- OP-604, Diesel Generator ‘A’ Remote Manual Slow Peed Start, Rev.106
- OST-201-1, Motor Driven Auxiliary Feedwater System Component Test- Train A, Rev. 36
- EST-146, End of Life Moderator Temperature Coefficient Measurement, Rev. 7

In-Service Tests (IST)

- OST-303-1, Service Water Booster Pump ‘A’ Test, Rev. 22

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06 – 1 sample)

a. Inspection Scope

The inspectors observed the emergency preparedness drill conducted on February 18, 2015. The inspectors observed licensee activities in the simulator and/or technical support center to evaluate implementation of the emergency plan, including event classification, notification, and protective action recommendations. The inspectors evaluated the licensee's performance against criteria established in the licensee's procedures. Additionally, the inspectors attended the post-exercise critique to assess the licensee's effectiveness in identifying emergency preparedness weaknesses and verified the identified weaknesses were entered in the corrective action program. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151 – 3 samples)

a. Inspection Scope

The inspectors reviewed a sample of the performance indicator (PI) data, submitted by the licensee, for the Unit 1 and Unit 2 PIs listed below. The inspectors reviewed plant records compiled between January 1, 2014, and December 30, 2014 to verify the accuracy and completeness of the data reported for the station. The inspectors verified that the PI data complied with guidance contained in Nuclear Energy Institute 99-02, "Regulatory Assessment Performance Indicator Guideline," and licensee procedures. The inspectors verified the accuracy of reported data that were used to calculate the value of each PI. In addition, the inspectors reviewed a sample of related corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with PI data. Documents reviewed are listed in the Attachment.

Cornerstone: Mitigating Systems

- residual heat removal
- cooling water system

Cornerstone: Barrier Integrity

- reactor coolant system leak rate

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152)

.1 Routine Review

The inspectors screened items entered into the licensee's corrective action program to identify repetitive equipment failures or specific human performance issues for follow-up. The inspectors reviewed condition reports, attended screening meetings, or accessed the licensee's computerized corrective action database.

.2 Annual Followup of Selected Issues

a. Inspection Scope

The inspectors conducted a detailed review of condition report CR 727473, NRC and Nuclear Oversight Observations on Engineering.

The inspectors evaluated the following attributes of the licensee's actions:

- complete and accurate identification of the problem in a timely manner
- evaluation and disposition of operability and reportability issues
- consideration of extent of condition, generic implications, common cause, and previous occurrences
- classification and prioritization of the problem
- identification of root and contributing causes of the problem
- identification of any additional condition reports
- completion of corrective actions in a timely manner

Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

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

(Closed) Licensee Event Report (LER) 2014-002-00, Technical Specification Violation due to Incorrect Procedural Guidance

On June 26, 2014, the RPI for a control rod failed, meeting the entry criteria for TS LCO 3.1.7 Condition A, one ARPI per group inoperable for one or more groups. In lieu of entering the TS LCO for an inoperable control rod indication, the operators relied solely on the plant computer, as allowed by a station procedure, to determine rod position. On June 30, 2014, the ARPI was returned to service and compliance was

restored with TS 3.1.7 following replacement of a failed signal conditioner. When the RPI was returned to service it was determined that the control rod had not moved. A violation of TS occurred since the ARPI system was inoperable for a period longer than allowed by TS 3.1.7. On November 26, 2014, the licensee determined that the practice of crediting the plant computer in lieu of RPI was not within the CLB. Upon this determination, Standing Instruction 14-023 was issued to suspend this practice and CR 720726 was written to document this issue. The inspectors reviewed the corrective actions and determined that they were adequate. The enforcement aspects of this LER are documented in section 1R15. This LER is closed.

4OA6 Meetings, Including Exit

On April 15, 2015, the resident inspectors presented the inspection results to Mr. Glover and other members of the licensee's staff. The inspectors confirmed that proprietary information was not provided or examined during the inspection period.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel
C. Caudell, Regulatory Affairs
J. Conder, Assistant Operations Training Manager
T. Cosgrove, Plant General Manager
S. Connelly, Licensing
H. Curry, Training Manager
F. Giannone, Operations Training Manager
M. Glover, Site Vice President
E. Hedderman, Chemistry Manager
R. Hightower, Licensing/Reg. Programs Supervisor
D. Hoffman, Nuclear Oversight Manager
K. Holbrook, Operations Manager
M. Pastva, Jr., Nuclear Regulatory Affairs
S. Peavyhouse, Organizational Effectiveness Director
J. Rackley, Training Supervisor
C. Sherman, Radiation Protection Superintendent

NRC personnel
G. Hopper, Chief, Reactor Projects Branch 4

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened & Closed		
05000261/2015001-01	NCV	Inadequate 10 CFR 50.59 Evaluation Results in RPI System Inoperability
Closed		
05000261/2014-002-00	LER	Technical Specification Violation due to Incorrect Procedural Guidance

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures

OP-925, Cold Weather Operation, Rev. 62
AP-053, Severe Weather Response, Rev. 3

Action Requests

731587
733622
733626
733628

Section 1R04: Equipment Alignment

Procedures

OP- 604, Emergency Diesel Generators, Rev. 106
OP-402, Auxiliary Feedwater System, Rev. 93

Section 1R05: Fire Protection

Procedures

OMM-003, Fire Pre-Plan, Rev. 66

Drawings

HBR2-11937, Fire Pre-Plan 'A' Diesel Generator Room, Rev 4.
HBR2-11937, Fire Pre-Plan Turbine Building 350- East End Ground Level
HBR2-11937, Fire Pre-Plan Turbine Building 350- West End Ground Level
HBR2-11937, Fire Pre-Plan 'B' Diesel Generator Room
HBR2-11937, North Cable Vault
HBR2-11937, South Cable Vault
HBR2-11937, Pipe Alley

Action Requests

734378

Section 1R06: Flood Protection Measures

Action Requests

739670, Manhole M- 50A Has Cables in a Wetted Condition

Work Orders

1792619, MEGGER MOTOR FROM MCC-5(16C) EDG FUEL OIL XFR PMP
1935772, MEGGER MOTOR FROM MCC-5(16C) EDG FUEL OIL XFR PMP
2109597, MEGGER MOTOR FROM MCC-5(16C) EDG FUEL OIL XFR PMP
1469998, MEGGER MOTOR FROM MCC-5(16C) EDG FUEL OIL XFR PMP
2262823, MEGGER MOTOR FROM MCC-5(16C) EDG FUEL OIL XFR PMP
13410077, MEGGER MOTOR FROM MCC-5(16C) EDG FUEL OIL XFR PMP
1644251, MEGGER MOTOR FROM MCC-6(17D) (EDG FO XFR PMP "B"")
1775582, MEGGER MOTOR FROM MCC-6(17D) (EDG FO XFR PMP "B"")
1946165, MEGGER MOTOR FROM MCC-6(17D) (EDG FO XFR PMP "B"")

2100447, FO-XFER-B-MTR, MGGR MTR FRM MCC-6(17D)(EDG FO XFR PMP B)
2205107, FO-XFER-B-MTR, MOTOR INSPECTION AND TESTING
13347929, FO-XFER-B-MTR, MOTOR INSPECTION AND TESTING

Section 1R11: Licensed Operator Requalification

Other documents
License Operator Continuing Training, 2015 Exam 07, Rev. 0

Records
License Reactivation Packages (3 Reviewed)
LORP Training Attendance records (15 Reviewed)
Medical Files (10 Reviewed)
Remedial Training Records (19 Reviewed)
Simulator Deficiency Reports (Reviewed the complete January 2013 – February 2015 Simulator Service Request (SSR) report database)

Written Examinations
2015 SRO Biennial Requalification Exam 3
2015 RO Biennial Requalification Exam 2

Procedures
AD-OP-ALL-1000, Conduct of Operations, Rev.01
AD-TQ-ALL-0425, Simulator Scenario Based Testing, Rev 1
TAP-303, Operations Examination Review and Validation, Rev 14
TAP-403, Examination and Testing, Rev 44
TAP-410, NRC License Examination Security Program, Rev 21
TAP-411, Simulator Setup, Rev 34
TAP-416, Simulator Maintenance, Testing and Operation, Rev 2
TAP-419, Shift Technical Advisor Initial Training Program, Rev 0
TPP-206, Simulator Program, Rev 22
TRN-NGGC-0002, Performance Review and Remedial Training, Rev 6
TRN-NGGC-0440, Regulated Exam Security, Rev 1
TRN-NGGC-0441, Licensed Operator Requal Annual/Biennial Exam Development, Rev 3
TRN-NGGC-0450, Shift Technical Advisor Training Program, Rev 3

Self-Assessment Report
649489, Pre-NRC 71111.11 Inspection Self-Assessment, Rev 1

Licensee Event Reports
2013-001-00
2013-002-00
2013-003-00
2014-001-00

Nuclear Condition Reports

NCR 610836	NCR 654679	NCR 722502
NCR 616829	NCR 667764	
NCR 641850	NCR 718099	

Simulator Steady State Tests
1.0, Real Time Simulation, Rev 12 (Reviewed tests performed in 2012 and 2014)
2.0.2, Full Power-Steady State Comparison Test, Rev 10 (Reviewed tests performed in 2013 and 2014)
2.0.3, Int. Pwr Steady State Comparison Test, Rev 10 (Reviewed tests performed in 2013 and 2014)

Simulator Transient Tests
4.7, Maximum Rate Power Ramp Transient Test, Rev 15 (Reviewed tests performed in 2012 and 2014)

Simulator Malfunctions
4.10, Pressurizer PORV Stuck Open Without SI Transient Test, Rev 21 (Reviewed tests performed in 2012 and 2014)
4.11, Maximum Design Load Rejection Test, Rev 10 (Reviewed tests performed in 2012 and 2014)

Scenario Based Testing
Record for 2015 Simulator Scenario Exam 01 (performed 01/07/2015)
Record for 2015 Simulator Scenario Exam 02 (performed 02/10/2015)
Record for 2015 Simulator Scenario Exam 12 (performed 01/07/2015)

Scenario Packages
2013 Exam 11, Loss of SUT/UAT with Two Faulted SGs
2013 Remedial #1, Steam Break Inside the CV
2013 Remedial #2, Dropped Control Rod and LB LOCA
2015 Exam 01, Failed Fuel with Rod Ejection/SB LOCA
2015 Exam 02, SG Tube Leak/Rupture
2015 Exam 10, RCP Seal Leak/Failure with LB LOCA
2015 Exam 12, Seismic Event with ATWS/Faulted SG

JPM Packages
ADM-026, LOCA and Loss of Offsite Power
CR-006, Isolate a Faulted Steam Generator
CR-041, Respond to a RCP Seal Malfunction
CR-055, Respond to a Loss of a Circulating Water Pump
CR-101, Adjust Reactor Power to the Point of Adding Heat
CR-119, Perform a Post LOCA Cooldown and Depressurization IAW EOP-ES-1.2, Alternate Path
IP-018, Control Steam Generator PORV's at Secondary Control Panel
IP-044, Perform Attachment 2 of EOP-ES-1.3 CVCS Charging System Local Actions
IP-127, Respond to a Loss of Instrument Air, Alternate Path
IP-181, Isolate the Turbine Building Service Water IAW DSP-002 Attachment 2, Alternate Path

Section 1R12: Maintenance Effectiveness

Other documents

Maintenance Rule Scoping and Performance Criteria- Containment Isolation Valve
Maintenance Rule Monitoring Status as 3/25/2015 for Containment Isolation Valve
Maintenance Rule Scoping and Performance Criteria - Reg Guide 1.97 Instrumentation
PMR#703798, RNP PM Technical Basis Evaluation, Replace Components on EOF/TSC/SEC EDG control panel and day tank

Procedures

OST-406, TSC/EOF/Security Diesel Generator (Monthly except when OST-405 is scheduled) Rev. 33
APP-040, TSC/EOF/Security Diesel Generator Remote Alarm Panels, Rev. 9
EDP-007, Power Panels Rev. 109

Drawings

HBR2-09578, PAP Emergency Diesel Generator Day Tank Wiring, Rev. 2
HBR2-11436, Schematic EOF/TSC Security Emergency Diesel Generator, Rev. 9
HBR2-13635, HBR EOF/TSC Security Diesel Fuel Oil Day Tank Wiring Diagram, Rev. 1

Action Requests

737115

Section 1R13: Maintenance Risk Assessments and Emergent Work Evaluation

Procedures

OMM-048, Work Coordination and Risk Assessment, Rev. 58
AD-OP-ALL-0201, Protected Equipment, Revs. 0/1

Action Requests

735205
738610
738051

Other documents

15W04-07 RNP Risk Profile, 01/19 to 01/25 'B' Work Train, Rev. 4
15W012- RNP Risk Profile, 03/16 to 03/22 'A' Work Train, Rev. 0

Section 1R15: Operability Evaluations

Procedures

OST-20, Shiftly Surveillances, Rev. 50

Other Documents

726206	653223	702356
728666	653370	707084
720726	729926	730632
695430	729260	730678
729926	728666	730284
729922	680011	739061
667499	679980	739065

681581	708010	696007
681708	695430	695121

Work Orders
13492232-01, UT Pipe 4-FW-1502N-32 Due To External Corrosion

Other documents
Letter Dated October 2, 1997, Transmittal of Supplement 5 regarding the TS change request to convert to ISTS
Letter Dated June 13, 1997, Transmittal of Supplements 6 and 8 – ERRATA regarding the TS change request to convert to ISTS
Letter Dated October 29, 1979 from Mr. A Schwencer, NRC, to Mr. J. Jones, CP&L
EC 99401, DC Trains cross connected
ESR 9700611 Rod Position Indication Drift
EC 98413, Acceptability of ERFIS

Section 1R19: Post Maintenance Testing
Procedures
PLP-033, Post-Maintenance Testing Program, Rev. 63

Other documents
"B" EDG Critical Evolution Overview (1/18/15 to 1/22/15), Rev. 1
EC 98086, Dedicated Shutdown Diesel Generator (DSDG) Motor Operated Potentiometer (MOP) Replacement

Procedures
OST-409-2, EDG "B" Fast Speed Start, Rev. 61

Section 1R22: Surveillance Testing
Procedures
FMP-001, Current Cycle Core Operating Limit Report, Rev. 30

Section 1EP6: Drill Evaluation
Other
Controller Book for ERO Integrated Drill on February 18, 2015

Action Requests
734674
734681
734684
733421