



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

April 22, 2013

Mr. William Gideon
Carolina Power and Light Company
Vice President - Robinson Plant
H. B. Robinson Steam Electric Plant
Unit 2
3581 West Entrance Road
Hartsville, SC 29550

SUBJECT: H.B. ROBINSON STEAM ELECTRIC PLANT - NRC INTEGRATED INSPECTION
REPORT 05000261/2013002

Dear Mr. Gideon:

On March 31, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your H. B. Robinson Steam Electric Plant, Unit 2. The enclosed inspection report documents the inspection results which were discussed on April 16, 2013, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

No findings were identified during this inspection.

In accordance with 10 CFR 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 Publicly Available Records (PARS) component of NRC's Agencywide Document Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Randall A. Musser, Chief
Reactor Projects Branch 4
Division of Reactor Projects

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

Enclosure: Inspection Report 05000261/2013002
w/Attachment: Supplemental Information

cc w/encl: (See page 2)

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Letter to William R. Gideon from Randall A. Musser April 22, 2013.

SUBJECT: H.B. ROBINSON STEAM ELECTRIC PLANT - NRC INTEGRATED INSPECTION
REPORT 05000261/2013002

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No: 50-261

License No: DPR-23

Report No: 005000261/2013002

Facility: H. B. Robinson Steam Electric Plant, Unit 2

Location: 3581 West Entrance Road
Hartsville, SC 29550

Dates: January 1, 2013 through March 31, 2013

Inspectors: J. Hickey, Senior Resident Inspector
C. Scott, Resident Inspector
E. Lea, Senior Operations Engineer (Section 1R11)
D. Lanyi, Operations Engineer (Section 1R11)

Approved by: Randall Musser, Chief
Reactor Projects Branch 4
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000261/2013002, Carolina Power and Light Company; on 01/01/2013-03/31/2013; H.B. Robinson Steam Electric Plant, Unit 2, Integrated Report

The report covered a three month period of inspection by resident inspectors and operations engineers. No findings were identified during this inspection period. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4.

A. NRC-Identified and Self-Revealing Findings

None

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REPORT DETAILS

Summary of Plant Status

The unit began the inspection period at rated thermal power. On February 15, 2013, a planned down power to 47 percent power was performed for turbine valve maintenance. The unit returned to full power on February 19, 2013. On March 22, 2013, a planned down power to 90 percent was performed to repair a moisture separator re-heater drain valve. The unit returned to full power the same day and operated at full power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection

Response to Impending Severe Weather

a. Inspection Scope

When a tornado watch was issued for the site on January 31, 2013, the inspectors reviewed actions taken by the licensee in accordance with Procedure OMM-021, Operation During Adverse Weather Conditions. The inspectors verified the adverse weather conditions did not initiate a plant event nor prevent any system, structure, or component (SCC) from performing its design function. Documents reviewed are listed in the Attachment.

The inspectors reviewed the following action requests (ARs) associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- AR #589209, Safety Related Freeze Protection Strip Heater Failed
- AR #590015, LT-10704, Makeup Water Level Indication Freeze Protection may be Bad

b. Findings

No findings were identified.

1R04 Equipment Alignment

a. Inspection Scope

Partial System Walkdowns

The inspectors performed the following four partial system walkdowns, while the indicated SSCs were out-of-service for maintenance and testing or following surveillance testing:

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- “B” Emergency Diesel Generator (EDG) while the “A” EDG was out-of-service for surveillance testing;
- “B” Service Water (SW) Booster Pump while the “A” SW Booster Pump was out-of-service for maintenance,
- “A” Auxiliary Feed Water (AFW) Pump while the “B” AFW Pump was out-of-service for maintenance; and
- “B” and “C” Component Cooling Water (CCW) Pumps while the “A” CCW Pump was out-of-service for maintenance.

To evaluate the operability of the selected trains or systems under these conditions, the inspectors compared observed positions of valves, switches, and electrical power breakers to the procedures and drawings listed in the Attachment.

Complete System Walkdown

The inspectors conducted a detailed review of the alignment and condition of the Isolation Valve Seal Water system to verify that the existing alignment of the system was consistent with the correct alignment. To determine the correct system alignment, the inspectors reviewed the procedures, drawings, and the Updated Final Safety Analysis Report (UFSAR) section listed in the Attachment. The inspectors also walked down the system. During the walkdown, the inspectors reviewed the following:

- Valves were correctly positioned and did not exhibit leakage that would impact the functions of any given valve.
- Electrical power was available as required.
- Major system components were correctly labeled, lubricated, cooled, ventilated, etc.
- Hangers and supports were correctly installed and functional.
- Essential support systems were operational.
- Ancillary equipment or debris did not interfere with system performance.
- Tagging clearances were appropriate.
- Valves were locked as required by the locked valve program.

The inspectors reviewed the documents listed in the Attachment to verify that the ability of the system to perform its functions could not be affected by outstanding design issues, temporary modifications, operator workarounds, adverse conditions, and other system-related issues tracked by the engineering department.

The inspectors reviewed the following ARs associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- AR #539402, Position of Primary Instrument Air Compressor Valve IA-3871 on drawing does not match operating procedure line-up
- AR #524861, Containment Isolation and EOP Tags not Annotated in OP-202, Safety Injection and Containment Spray

b. Findings

No findings were identified.

1R05 Fire Protection

.1 Quarterly Resident Inspector Tours

a. Inspection Scope

For the six areas identified below, the inspectors reviewed the control of transient combustible material and ignition sources, fire detection and suppression capabilities, fire barriers, and any related compensatory measures to verify that those items were consistent with UFSAR Section 9.5.1, Fire Protection System, and UFSAR Appendix 9.5.A, Fire Hazards Analysis. The inspectors walked down accessible portions of each area and reviewed results from related surveillance tests to verify that conditions in these areas were consistent with descriptions of the areas in the UFSAR. Documents reviewed are listed in the Attachment.

The following areas were inspected:

- Control Room (fire zone 22)
- Dedicated Shutdown Diesel Enclosure (fire zone 25D)
- Emergency Switchgear (E-1/E-2) Room (fire zone 20)
- Unit 2 Cable Spread Room (fire zone 19)
- Component Cooling Pump Room (fire zone 5)
- Auxiliary Feedwater Pump Room (fire zone 6)

The inspectors reviewed the following ARs associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- AR #541388, Motor Generator Room Fire Door 7 binding when opening
- AR #589489, DSP-007, Cold Shutdown Using the Dedicated /Alternative Shutdown System, Attachment 13 is missing a Step needed to Open RHR-751, Loop "B" Hot Leg to RHR System

b. Findings

No findings were identified.

.2 Annual Fire Protection Drill Observation

a. Inspection Scope

To evaluate the readiness of personnel to fight fires, the inspectors observed fire brigade performance during an announced drill at MCC-4 on the second floor of the Unit 2 Turbine Building on February 24, 2013. This included observing the pre-drill briefing for

the drill controllers, dress out of the fire brigade members in the fire locker, fire brigade performance at the fire scene, and the post-drill critiques for the controllers and the fire brigade. The inspectors evaluated the fire brigade performance to verify that they responded to the fire in a timely manner, donned proper protective clothing, used self-contained breathing apparatus, and had the equipment necessary to control and extinguish the fire. The inspectors also assessed the adequacy of the fire brigade's fire fighting strategy including entry into the fire area, communications, search and rescue, and equipment usage.

b. Findings

No findings were identified.

1R06 Flood Protection Measures

.1 Underground Cable Inspection

a. Inspection Scope

The inspectors walked down two underground cable manholes/bunkers to verify the following:

- The cable was not submerged in water;
- The condition of any cable splices;
- The condition of any cable support structures; and
- The condition of any dewatering devices, if applicable.

The following cable/locations were inspected:

- "A" and "B" Service Water Pump location M-35
- "C" and "D" Service Water Pump location M-36

Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R07 Heat Sink Performance

a. Inspection Scope

The inspectors observed the inspection of the "B" Auxiliary Feedwater Pump Lube Oil Heat Exchanger to verify that inspection results were appropriately categorized against the pre-established acceptance criteria described in Procedure CM-201, Safety Related and Non-Safety Related Heat Exchanger Maintenance, Rev. 51. The inspectors also

verified that the frequency of inspection was sufficient to detect degradation prior to loss of heat removal capability below design basis values.

b. Findings

No findings were identified.

1R11 Licensed Operator Regualification

.1 Quarterly Review

a. Inspection Scope

The inspectors observed licensed-operator performance during requalification simulator training. The session was comprised of several scenarios chosen by the shift manager. This training tested the operators' ability to operate components from the control room and direct auxiliary operator actions, while responding to a loss of instrument bus 3 which required manual control of all steam generator levels. Another scenario included a failure of the primary pressure control transmitter which resulted in a pressurizer relief valve to open, a service water pipe break lead to a turbine trip without reactor trip. The inspectors focused on clarity and formality of communication, the use of procedures, alarm response, control board manipulations, group dynamics, and supervisory oversight.

The inspectors observed the post-exercise critique to verify that the licensee identified deficiencies and discrepancies that occurred during the simulator training.

Licensed Operator Performance in the Actual Plant/Main Control Room

The inspectors observed and assessed licensee operator performance on February 15, 2013, during a down power to 50 percent to support turbine valve maintenance and testing. During this period of heightened risk, the inspectors verified that the licensed operator's actions and communication were in accordance with OMM-001, Conduct of Operations, Rev. 62. Documents reviewed are listed in the Attachment.

The inspectors reviewed the following AR associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- AR #527310, AP-030, NRC Reporting Requirements needs feedwater isolation signal evaluation

b. Findings

No findings were identified.

.2 Licensed Operator Requalification Program

a. Inspection Scope

The inspectors reviewed the facility operating history and associated documents in preparation for this inspection. During the week of February 18, 2013, 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 Inspection Procedure 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, watch standing records, and medical records. The records were inspected using the criteria listed in Inspection Procedure 71111.11. Documents reviewed during the inspection are documented in the List of Documents Reviewed.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed the three degraded SSC/function performance problems or conditions listed below to verify the appropriate handling of these performance problems or conditions in accordance with 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, and 10 CFR 50.65, Maintenance Rule. Documents reviewed are listed in the Attachment.

- "B" EDG planned inspection/maintenance work January 21, 2013 through January 24, 2013;
- 10CFR 50.65(a)(3) Maintenance Rule Periodic Assessments (October 1, 2009 to April 1, 2011, and April 1, 2011 to October 1, 2012); and
- Auxiliary Feedwater System condition monitoring and maintenance.

During the reviews, the inspectors focused on the following:

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- Appropriate work practices,
- Identifying and addressing common cause failures,
- Scoping in accordance with 10 CFR 50.65(b),
- Characterizing reliability issues (performance),
- Charging unavailability (performance),
- Trending key parameters (condition monitoring),
- 10 CFR 50.65(a)(1) or (a)(2) classification and reclassification, and
- Appropriateness of performance criteria for SSCs/functions classified (a)(2) and/or appropriateness and adequacy of goals and corrective actions for SSCs/functions classified (a)(1).

The inspectors reviewed the following ARs associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- AR #591005, Molded Case Circuit Breakers do not have specific test procedures
- AR #591771, Unexpected Plant Computer Driven Alarms during Maintenance

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

For the six samples listed below, the inspectors reviewed risk assessments and related activities to verify that the licensee performed adequate risk assessments and implemented appropriate risk-management actions when required by 10 CFR 50.65(a)(4). For emergent work, the inspectors also verified that any increase in risk was promptly assessed, and that appropriate risk-management actions were promptly implemented. Documents reviewed are listed in the Attachment. Those periods included the following:

- January 7 through January 11, 2013, MST- 013, Steam Generator Level Control Surveillance, "A" Safety Injection Pump inspection, Containment Spray Motor Operated Valve SI-880A grease inspection;
- January 16, 2013, Yellow Risk while replacing oil sightglass on the motor driven fire pump;
- January 21 through January 25, 2013, "B" EDG inspection/maintenance outage, "C" Safety Injection Pump oil sample;
- January 30, 2013, Yellow Risk while Refueling Water Storage Tank (RWST) Level Transmitters LT-948, LT-969 where unavailable for repair of RWST Drain Valve ,SI-837 and "B" Residual Heat Removal (RHR) Pump was out-of-service for preplanned maintenance;
- February 3, 2013, Yellow Risk while Pressurizer Power Operated Relief Valve (PORV), PC-455C was unavailable for the replacement of Reactor Coolant System (RCS) Overpressure Select Signal Characterizer, QM-503; and

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- March 19, 2013, Yellow Risk while Steam Driven Auxiliary Feedwater Pump was out-of service-for maintenance.

The inspectors reviewed the following ARs associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- AR #558627, EDG surveillance schedule duration not revised
- AR #585155, Status Reports and Logs Not Accurate for Protected Equipment

Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the four operability determinations associated with the ARs listed below. The inspectors assessed the accuracy of the evaluations, the use and control of any necessary compensatory measures, and compliance with the Technical Specification (TS). The inspectors verified that the operability determinations were made as specified by Procedure OPS-NGGC-1305, Operability Determinations. The inspectors compared the justifications provided in the determinations to the requirements from the TS, the UFSAR, associated design-basis documents, to verify that operability was properly justified and the subject components or systems remained available, such that no unrecognized increase in risk occurred:

- AR #581352, Missing bolts on the roof access panels above the residual heat exchanger room
- AR #586070, Dedicated Shutdown Diesel Generator Voltage Fluctuations
- AR #574530, Visible corrosion on seven positive battery posts for the "B" Station Battery
- AR #588746, "A" AFW Outboard Packing Gland Channel Clogged

Documents reviewed are listed in the Attachment.

The inspectors reviewed the following ARs associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- AR #584781, HVE-17, EDG "B" Room Exhaust Fan was Found to have Degraded Fan Bearing
- AR #584310, HVS-5, EDG "B" Room Supply Fan, Started Unexpectedly

b. Findings

No findings were identified.

1R18 Plant Modifications.1 Permanent/Temporary Modificationsa. Inspection Scope

The inspectors reviewed the modification listed below, to verify that the modification design, implementation, and testing did not degrade the design basis, and performance capabilities of risk significant equipment and did not place the plant in an unsafe or unanalyzed condition. The inspectors verified that the modification satisfied the requirements of Procedure EGR-NGGC-005, Engineering Change (EC), and 10 CFR 50, Appendix B, Criterion III, Design Control.

- EC 88526, RWST Drain Valve, SI-837 Temporary Leak Repair

Documents reviewed included procedures, engineering calculations, modification design and implementation packages, work orders, site drawings, corrective action documents, applicable sections of the UFSAR, supporting analyses, TS, and design basis information. Additionally, the inspectors reviewed test documentation to ensure adequacy in scope and conclusion. The inspectors' reviews were also intended to verify that all appropriate details were incorporated in licensing and design basis documents and associated plant procedures. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R19 Post Maintenance Testinga. Inspection Scope

For the eleven post-maintenance tests (PMT) listed below, the inspectors witnessed the test and/or reviewed the test data to verify that test results adequately demonstrated restoration of the affected safety functions described in the UFSAR and TS. Documents reviewed are listed in the Attachment.

The following tests were witnessed/reviewed:

- WO 1966273, Clean and Test "B" Motor Driven Auxiliary Feedwater (MDAFW) Pump Oil Cooler, PMT in accordance with OST-201-2, MDAFW System Component Test-Train B, Rev. 30;
- WO 197589401, Install Refurbished Module for QM-503, RCS Overpressure Protection Selector Signal Characterizer PMT in accordance with LP-039, Overpressure Protection System, Rev. 18;
- WO 1854244, Replace "B" EDG standby circulating water pump, PMT in accordance with the work order;

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- WO 01839111, Inspect CCW-PMP for Foreign Material per EC 78753, PMT in accordance with OST-908, Component Cooling Water (CCW) System Component Test, Rev. 81;
- WO 01711348, Clean & Inspect Packing on "A" AFW Pump, PMT in accordance with OST-201-1, MDAFW System Component Test-Train A, Rev. 34;
- WO 1952703, Replace Coil and Switch Contactor on "A" Service Water Booster Pump (SWBP) Breaker, PMT in accordance with OP-903, Service Water System, Rev. 128;
- WO 1921288, Limitorque Grease Inspection of Containment Spray Pump "B" Suction, SI-844B, PMT in accordance with OST-352-4 Comprehensive Flow Test for Containment Spray Pump "B" Rev. 21;
- WO 1903814, Replace Charging Pump "C" Speed Control Actuator, PMT in accordance with OST-101-3 Chemical Volume and Control System (CVCS) Component Test Charging Pump C, Rev. 46;
- WO 2181912, Replacement of a motor operated potentiometer on the Dedicated Shutdown Diesel Generator, PMT in accordance with OST-948, Auto Start of the Dedicated Shutdown Diesel Generator, Rev. 3;
- WO 1979592, Clean and Inspect the Steam Driven AFW Pump Lube Oil Cooler, PMT in accordance with OST-202, Steam Driven Auxiliary Feedwater System Component Test, Rev. 83; and
- WO 222317, Repair pinched wire and pressure switch on the 1A Water Cooled Cooling Unit for control room ventilation. PMT in accordance with OST-750-1, Control Room Emergency Ventilation System – Train A (Monthly), Rev. 17.

The inspectors reviewed the following ARs associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- AR #409999, Packing torque exceeded for RHR-751, Residual Heat Removal Suction Valve without diagnostic testing
- AR #410519, Breaker 52/26, "C" Component Cooling Water Pump Cable through cover installed upside down

b. Findings

No findings were identified.

1R22 Surveillance Testinga. Inspection Scope

For the eight surveillance tests listed below, the inspectors witnessed testing and/or reviewed the test data to verify that the SSCs involved in these tests satisfied the requirements described in the TS, the UFSAR, and applicable licensee procedures, and that the tests demonstrated that the SSCs were capable of performing their intended safety functions. Documents reviewed are listed in the Attachment.

Routine Surveillance Testing

- OST-409-1, EDG "A" Fast Speed Start, Rev. 54;
- OST-402-1, EDG "A" Diesel Fuel Oil System Flow Test, Rev. 32;
- OST-409-2, EDG "B" Fast Speed Start, Rev. 55;
- OST-303-1, Service Water Booster Pump "A" Test, Rev. 17;
- OST-603, Motor Driven Fire Water Pump and Engine Driven Fire Pump Test (Weekly), Rev. 34;
- OST-910, Dedicated Shutdown Diesel Generator (Monthly), Rev. 53

In-service Testing Surveillance;

- OST-352-1; Containment Spray Component Test - Train A, Rev. 33

Reactor Coolant System Leakage Surveillance

- OST-051, Reactor Coolant Leakage Evaluation (Every 72 Hours during Steady State Operation and within 12 hours of reaching Steady State Operation) Rev. 46.

The inspectors reviewed the following ARs associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- AR #571277, Battery Charger "A-1" voltmeter reading high during quarterly surveillance test
- AR #566837, Service water strainer gearbox is dripping oil, noted during surveillance testing

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 Emergency Planning Drill Evaluation

a. Inspection Scope

On March 27, 2013, the inspectors observed an emergency preparedness drill to verify licensee self-assessment of classification, notification, and protective action recommendation development in accordance with 10 CFR 50, Appendix E. The inspectors also attended the post-drill critique to verify that the licensee properly identified failures in classification, notification and protective action recommendation development activities. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

The inspectors verified the PIs identified below. For each PI, the inspectors verified the accuracy of the PI data that had been previously reported to the NRC by comparing that data to the actual data, as described below. The inspectors also compared the licensee's basis in reporting each data element to the PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline," Rev. 6. The inspectors also interviewed licensee personnel associated with collecting, evaluating, and distributing these data.

Mitigating Systems Cornerstone

- Mitigating Systems Performance Index (MSPI), Residual Heat Removal System
- MSPI, Cooling Water Systems

For the period from the 1st quarter of 2012, through the 4th quarter of 2012, the inspectors reviewed Licensee Event Reports (LERs), records of inoperable equipment, and Maintenance Rule records to verify that the licensee had accurately accounted for unavailability hours that the subject systems had experienced during the subject period. The inspectors also reviewed the number of hours those systems were required to be available and the licensee's basis for identifying unavailability hours.

Barrier Integrity Cornerstone

Enclosure

- Reactor Coolant System Specific Activity

The inspectors observed sampling and analysis of reactor coolant system samples, and compared the reported performance indicator data with records developed by the licensee while analyzing previous samples, for the period from the 1st quarter of 2012, through the 4th quarter of 2012.

- Reactor Coolant System Leakage

The inspectors reviewed records of daily measures of RCS identified leakage and compared the reported performance indicator data with records developed by the licensee while analyzing previous samples, for the period from the 1st quarter of 2012, through the 4th quarter of 2012.

The inspectors reviewed the following AR associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- AR #434061, Organization did respond aggressively to declining performance in the Unplanned Scrams Per 7000 Hours indicator

b. Findings

No findings were identified.

4OA2 Identification and Resolution of Problems

.1 Routine Review of ARs

To aid in the identification of repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed frequent screenings of items entered into the CAP. The review was accomplished by reviewing daily AR reports.

.2 Annual Sample Review

a. Inspection Scope

The inspectors selected AR #588030, "A" Battery Charger Terminal Board Separation, for detailed review. The inspectors reviewed the associated condition report to verify:

- complete and accurate identification of the problem in a timely manner;
- evaluation and disposition of performance issues;
- evaluation and disposition of operability and reportability issues;
- consideration of extent of condition, generic implications, common cause, and previous occurrences;
- appropriate classification and prioritization of the problem;
- identification of root and contributing causes of the problem;

Enclosure

- identification of corrective actions which were appropriately focused to correct the problem; and
- completion of corrective actions in a timely manner.

The inspectors also reviewed this AR to verify compliance with the requirements of the CAP as delineated in Procedure CAP-NGGC-0200, Corrective Action Program, and 10 CFR 50, Appendix B. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

4OA5 Other Activities

.1 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period, the inspectors observed security force personnel and activities to ensure that the activities were consistent with licensee security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours.

These quarterly resident inspector observations of security force personnel and activities did not constitute any additional inspection samples. Rather, they were considered an integral part of the inspectors' normal plant status review and inspection activities.

b. Findings

No findings were identified.

.2 (Closed) NRC Temporary Instruction (TI) 2515/187, Inspection of Near-Term Task Force Recommendation 2.3 Flooding Walkdowns

a. Inspection Scope

Inspectors verified that licensee's walkdown packages for the areas contained the elements as specified in NEI 12-07 Walkdown Guidance document:

The inspectors accompanied the licensee on their walkdown of the following locations:

- South Service Water Strainer Pit
- Lake Robinson Dam
- Intake structure

The inspectors verified that the licensee confirmed the following flood protection features:

Enclosure

Visual inspection of the flood protection feature was performed if the flood protection feature was relevant. External visual inspection for indications of degradation that would prevent its credited function from being performed was performed.

- Reasonable simulation, used for responding to high lake level
- Critical SSC dimensions were measured
- Available physical margin, where applicable, was determined.
- Flood protection feature functionality was determined using either visual observation or by review of other documents.

The inspectors independently performed their walkdown and verified that the following flood protection features were in place.

- Safety Injection Pump Room

The inspectors verified that noncompliance's with current licensing requirements, and issues identified in accordance with the 10 CFR 50.54(f) letter, Item 2.g of Enclosure 4, were entered into the licensee's CAP. In addition, issues identified in response to Item 2.g that could challenge risk significant equipment and the licensee's ability to mitigate the consequences will be subject to additional NRC evaluation.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On April 16, 2013, the resident inspectors conducted the final exit meeting, with Mr. Gideon, to discuss the inspection results.

4OA7 Licensee-Identified Violations

None

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

T. Cosgrove, Plant General Manager
S. Connelly, Licensing
H. Curry, Training Manager
D. Douglas, Maintenance Manager
R. Gideon, Vice President
M. Glover, Director – Site Operations
R. Hightower, Licensing/Reg. Programs Supervisor
D. Hoffman, Nuclear Oversight Manager
K. Holbrook, Operations Manager
B. Houston, Radiation Protection Superintendent
L. Martin, Engineering Director
K. Moser, Outage & Scheduling Manager
J. Rotchford Jr., Environmental & Chemistry Superintendent
S. Wheeler, Organizational Effectiveness Manager

NRC personnel

R. Musser, Chief, Reactor Projects Branch 4

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

Temporary Instruction (TI) 2515/187	TI	Inspection of Near-Term Task Force Recommendation 2.3 Flooding Walkdowns (Section 4OA5.2)
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LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Action Requests

AR #586364, Redundant Adverse Weather Procedure Guidance
AR #586392, Control Room Weather Radio Gave No Warning of Tornado Watch

Section 1R04: Equipment Alignment

Procedures

OP-306, Component Cooling Water System, Rev. 72
OP-604, Diesel Generator "B" Checklist, Rev. 95
OP-402, Auxiliary Feedwater System, Rev. 81
OP- 903, Service Water System, Rev. 128
OP-911, Isolation Valve Seal Water System, Rev. 26

Drawings

G-190262, Isolation Valve Seal Water System, Rev. 30

Section 1R05: Fire Protection

Procedures

OMM-003, Fire Pre Plans, Rev. 59
TPP-219, Fire Drill Critique 13-1Q-02A, MCC-4 Turbine Building (Scenario 34, Rev.2)

Drawings

HBR2-11937, Fire Pre-Plan Unit 2 Cable Spread Room, Rev. 0
HBR2-11937, Fire Pre-Plan Emergency Switchgear Room, Rev. 2
HBR2-11937, Fire Pre-Plan D.S. Diesel Enclosure, Rev. 0
HBR2-11937, Fire Pre-Plan Control Room, Rev. 0
HBR2-11937, Fire Pre-Plan Component Cooling Pump Room, Rev. 1
HBR2-11937, Fire Pre-Plan Auxiliary Feedwater Pump Room, Rev. 1

Other documents

Fire Drill Scenario 34, Turbine Bldg., Mezzanine Deck, West End, MCC-4, Rev.2
UFSAR Sections of Appendix 9.5.1A

Section 1R06: Flood Protection MeasuresOther documents

WO2150222, Service Water Pump Cable Vault inspection
 DWG 52696-E-3002 Sheet 1, Service Water Pump cable locations

Section 1R07: Heat Sink PerformanceProcedures

CM-201, Safety Related and Non-Safety Related Heat Exchanger Maintenance, Rev.51

Action Requests

AR #203079

Other documents

WO 1966273, Clean And Test "B" Motor Driven AFW
 PMR 252688, Revise Frequency of PMQRs 15845-01, 15846-01

Section 1R11: Licensed Operator RequalificationProcedures

OP-105, Maneuvering the Plant When Greater Than 25 percent Power, Rev. 55

Other documents

Reactivity Manipulation Plan R2C28 Turbine Valve Test dated 2/15/2013

TAP-403, Examination and Testing, Rev 43

TAP-410, NRC License Examination Security Program, Rev 20

TTP -200, Licensed Operator/Shift Technical Advisor Continuing Training Program, Rev 21

TRN-NGGC-0002, Performance Review and Remedial Training, Rev 4

TRN-NGGC-0440, Regulated Exam Security, Rev 0

TRN-NGGC-0420, Conduct of Simulator Training and Evaluation, Rev 3

Test No: 1, Real Time Simulation Verification, Rev 12, 12/13/12

Test No.: 2.0.1, Full Power Simulator Stability Test, Rev. 12, 12/31/12

Test No.2: 2.0.2, Full Power – Steady State Comparison Test, Rev. 10, 1/7/13

Test No. 4.2, Simultaneous Trip of MFW Pumps Transient Test, Rev 16, 11/17/12

Test No. 4.4, Simultaneous Trip of all RCP Transient Test, Rev 18, 11/17/12

Test No. 4.9, DBA Main Steam Line Break Transient Test, Rev. 21, 11/18/12

Test No. 4.10, PZR PORV Stuck Open without SI Transient Test, Rev. 20, 11/19/12

2013 Exam 1, Revision 0, 1/24/13

2013 Exam 6, Revision 0, 1/24/13

2013 Exam 8, Revision 0, 1/24/13

2013 Exam 9, Revision 0, 1/24/13

2013 Exam 13 Revision 0, 1/29/13

2013 Exam 18, Revision 0, 2/7/13

Cycle 28 Core Update – Data Package 240, Rev 35, 2/22/12

Plant Event of 3/28/12 – Data Package 242, Rev. 0, 5/12/12

JPM-CR-004, Respond to ATWS Event, Rev. 14

JPM IP-013, Perform AOP-003, Rev. 12

JPM IP-037, Deenergize Aux. Panels and Emergency Busses Using DSP-002, Att. 2, Electrical Operator Actions, Rev. 7

JPM IP-044, Perform Att. 2 of EPP-9, Local Cold Leg Recirc Lineup, Rev. 7

JPM CR-055, Respond to a Loss of Circulating Water Pump, Rev. 1

JPM CR-067, Turbine Trip Below P-8, Rev. 2

JPM CR-084, Reactor Trip Response – Excessive RCS Cooldown, Rev. 2

JPM CR-118, Perform Rod Cluster Exercise IAW OST-011, Rev. 2

JPM CR-119, Perform a Post LOCA Cooldown and Depressurization IAW EPP-8, Rev. 2

JPM IP-123, Taking Local Handwheel Control of “C” Feedwater Regulating Valve, Rev. 2

2013 Biennial SRO Exam, 2/7/13

2013 Biennial RO Exam, 2/7/13

Section 1R12: Maintenance Effectiveness

Procedures

OP-604, Diesel Generators “A” and “B”, Rev. 95

ADM-NGGC-0101, Maintenance Rule Program, Rev.22

Work Orders

2127796, 2038535, 2146628, 2001554, 2056876, 2067140, 2127702, 2143033, 1854244, 2067141, 2100298,

Action Requests

362143, Establish a PM for EDG expansion tank solenoid valve replacement

362147, Establish a PM for EDG starting air start solenoid valve inlet filters

Other documents

PM008-22, Check “B” EDG generator bearing insulation

PM008-05, Inspect “B” EDG air inlet check valve

PM008-85, Inspect “B” EDG blower

Auxiliary Feedwater System Health Report

Maintenance Rule Scoping and Performance Criteria for the Auxiliary Feedwater System

Maintenance Rule Event Log for the Auxiliary Feedwater System

Maintenance Rule Performance Summary for the Auxiliary Feedwater System

Section 1R13: Maintenance Risk Assessments and Emergent Work Evaluation

Procedures

OMM-048, Work Coordination and Risk Assessment, Rev. 50

RNP Risk Profile for 13W06, 02/04 to 02/10, Rev 2

RNP Risk Profile for 13W12, 03/19, Rev 6

Section 1R15: Operability Evaluations

Action Requests

QCE 588746, "A" AFW Outboard Packing Gland Channel Clog

Other documents

EC 90741, DSDG Voltage Regulator Perturbations

EC 90490, "A" MDAFW Pump outboard Packing Gland Cooling Found Clogged During Performance of PM WO 1711348

Section 1R18: Plant Modifications

Procedures

REG-NGGC-0010, 10 CFR 50.59 and Selected Regulatory Reviews, Rev. 18

Other Documents

NDE Examination Report Summary # SI-837-1, Dated 11/13/12

NDE Examination Report Summary # SI-837-2, Dated 09/27/12

NDEP-0612, Visual Examination for Leakage (VT-2), Summary 213972, Dated 02/05/13

Section 1R19: Post Maintenance Testing

Procedures

PLP-033, Post-Maintenance Testing Program, Rev.56

CM-201, Safety Related and Non-Safety Related Heat Exchanger Maintenance, Rev.51

Action Requests

587708, "A" CCW Pump had a Casing Gasket Leak After Inspection

587489, "A" CCW PMP/Motor Did Not Need Rotational Check

596204 Steam Driven AFW Pump Suction Strainer Hold Down Fasteners

Other documents

HBR2-8643, Logic Diagram High Pressure –Low Temperature Protection System, Rev. 3

EC 51539, SADAFW Pump Self Cooling from Pump Seal Leakoff, Rev.3

G-190199, Service Water Cooling Water System Flow Diagram Sheet 13, Rev.46

Section 1R22: Surveillance Testing

Work Orders

2204632, EDPF Failed to Start During OST-603

Section 1EP6: Drill Evaluation

Other documents

Emergency Response Organization Exercise Scenario Package for March 27, 2013

Emergency Notification Forms for the March 27, 2013 Exercise

Section 40A2: Identification and Resolution of Problems

Procedures

CAP-NGGC-0200, Corrective Action Program, Rev. 35

CAP-NGGC-0206, Corrective Action Program Trending and Analysis, Rev. 6

OPS-NGGC-1000, Conduct of Operations, Rev. 10

OPS-NGGC-1316, Aggregate Risk Impact Assessment Program, Rev. 1

Other documents

CR 588030, 10 CFR 21 Screening Worksheet

EC 90443, "A" Battery Charger Terminal Board Separation, Rev. 0