UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET SW SUITE 23T85
ATLANTA, GEORGIA 30303-8931

October 9, 2003

Carolina Power and Light Company
ATTN: Mr. John Moyer
Vice President - Robinson Plant
H. B. Robinson Steam Electric Plant
Unit 2
3851 West Entrance Road
Hartsville, SC 29550

SUBJECT: H.B. ROBINSON STEAM ELECTRIC PLANT - NRC INTEGRATED INSPECTION REPORT 05000261/2003005

Dear Mr. Moyer:

On September 13, 2003, the US Nuclear Regulatory Commission (NRC) completed an inspection at your Robinson facility. The enclosed integrated inspection report documents the inspection findings, which were discussed on September 12, 2003, with Mr. Tim Cleary 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. Based on the results of this inspection, no findings of significance were identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document 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/

Paul E. Fredrickson, Chief
Reactor Projects Branch 4
Division of Reactor Projects

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

Enclosure: Inspection Report 05000261/2003005
w/Attachment: Supplemental Information

cc w/encl: (See page 2)

cc w/encls:
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DATE	10/02/2003	10/ 02 /2003	10/03/2003	10/03/2003			
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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No:	50-261
License No:	DPR-23
Report No:	05000261/2003005
Licensee:	Carolina Power and Light Company
Facility:	H. B. Robinson Steam Electric Plant, Unit 2
Location:	3581 West Entrance Road Hartsville, SC 29550
Dates:	June 15 - September 13, 2003
Inspectors:	R. Hagar, Senior Resident Inspector D. Jones, Resident Inspector M. Shannon, Senior Resident Inspector, Oconee
Approved by:	P. Fredrickson, Chief Reactor Projects Branch 4 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000261/2003-005; 06/15/2003-09/13/2003; H.B. Robinson Steam Electric Plant, Unit 2; routine integrated inspection report.

The report covered a three-month period of inspection by resident inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

No findings of significance were identified.

B. Licensee-Identified Violations

None

REPORT DETAILS

Summary of Plant Status: The unit began the inspection period at full rated thermal power, and operated at full power for the entire inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection

a. Inspection Scope

During a tornado watch that was issued for the Darlington County area on July 1, and prior to the onset of severe weather, the inspectors reviewed actions taken by the licensee in accordance with Procedure OMM-021, Operation During Adverse Weather Conditions, to verify that the anticipated weather conditions would neither initiate a plant event nor prevent any system, structure, or component (SSC) from performing its design function. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope

Partial System Walkdowns

During this inspection period, the inspectors performed the following four partial system walkdowns, to verify the operability of redundant systems with both trains in service or while the SSCs were out of service for maintenance and testing:

- Auxiliary feed water (AFW) system with the steam-driven AFW pump out of service on July 15.
- Component cooling water system on August 21.
- Service water system on August 19 and 20.
- Dedicated shutdown diesel generator during scheduled maintenance activities on August 28.

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

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

For the six areas identified below, the inspectors reviewed the licensee's 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 Final Safety Analysis Report (FSAR) Section 9.5.1, Fire Protection System, and FSAR Appendix 9.5.1A, 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 FSAR. Documents reviewed are listed in the Attachment.

The following areas were inspected:

Fire Zone	Description
3	Safety injection pump room
5	Component cooling room
7	Auxiliary building hallway (ground floor)
30	Diesel fuel oil storage tank
22	Control room
29	Service water pump area

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

On August 5, the inspectors observed licensed-operator performance during continuing simulator training for crew 2, to verify that operator performance was consistent with expected operator performance, as described in Operations Training Procedure, FSS-SEG-30. This training tested the operators' ability to correctly diagnose abnormal conditions, use appropriate emergency operating procedures when necessary, and declare the appropriate emergency action level in a timely manner. 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 also observed the post-exercise critique, to verify that the licensee identified deficiencies and discrepancies that occurred during the simulator training. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed overheating of the engine-driven fire pump, as described in action request (AR) 100310, to verify the licensee's appropriate handling of this condition in accordance with 10CFR50, Appendix B, Criterion XVI, Corrective Action, and 10CFR50.65, Maintenance Rule. Documents reviewed are listed in the Attachment.

During this review, the inspectors focused on the following:

- 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).

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

For the time periods listed below, the inspectors reviewed the licensee's risk assessments and the risk management actions used by the licensee to manage risk. The inspectors verified that the licensee performed adequate risk assessments, and implemented appropriate risk management actions when required by 10CFR50.65(a)(4).

- The work week of August 31, which included an outage of the A emergency diesel generator.
- The work week of September 7, which included maintenance on the A residual heat removal system and emergent work associated with a level-control valve.

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-Routine Plant Evolutions

a. Inspection Scope

On August 14, during a 12-MW load reduction that occurred as a result of electrical grid disturbances, the inspectors observed plant instruments and operator performance, to verify that the operators performed in accordance with the associated procedures and training. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the operability determination described in AR 99903, available net positive suction head for emergency core cooling system pumps. The inspectors assessed the accuracy of the evaluations, the use and control of any necessary compensatory measures, and compliance with the Technical Specifications (TS). The inspectors verified that the operability determination was made as specified by procedure PLP-102, Operability Determinations. The inspectors compared the justifications made in the determination to the requirements from the TS, the FSAR, and associated design-basis documents, to verify that operability was properly justified, and that the subject component or system remained available, such that no unrecognized increase in risk occurred. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R16 Operator Work-Arounds

a. Inspection Scope

The inspectors reviewed the cumulative effects of the operator workarounds in effect on July 18, to verify that those effects could not increase an initiating event frequency, affect multiple mitigating systems, or affect the ability of operators to respond in a correct and timely manner to plant transients and accidents.

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

For the seven post-maintenance tests 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 function(s) described in the FSAR and TS. Documents reviewed are listed in the Attachment. The tests included the following:

- OST-910, Dedicated Shutdown Diesel Generator (Monthly), on July 11
- OP-306, Component Cooling Water, on July 9
- OST-206, Comprehensive Flow Test for the Steam Driven Auxiliary Feedwater Pump, on July 15
- OST-202, Steam Driven Auxiliary Feed Water System Component Test, on July 15
- OST-401-1, Emergency Diesel Generator A Slow Speed Start, on July 14
- OST-152-1, SI Valve Position and ERFIS Indication Test - Train A, on July 16
- OST-401-1, Emergency Diesel Generator A Slow Speed Start, on September 3

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

For the five surveillance tests identified 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 FSAR, 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.

- OST-051, Reactor Coolant System Leakage Evaluation, on August 13
- OST-750-1, Control Room Emergency Ventilation System - Train A (Monthly), on July 10
- OST-642, Main Transformer Deluge System Flow Test (Annually), on July 3
- SFS-001, IF-300 Shipping Cask Operations, on July 1
- OST-252-1*, [Residual Heat Removal] System Valve Test - Train A, on September 10

*This procedure included inservice testing requirements.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed the temporary modifications described in the Engineering Changes (ECs) listed below, to verify that the modifications did not affect the safety functions of important safety systems, and to verify that the modifications satisfied the requirements of 10CFR50, Appendix B, Criterion III, Design Control. Documents reviewed are listed in the Attachment.

- EC 53127, Heating Ventilation Exhaust - 6A
- EC 53007, Belzona Repair to A Main Feed Pump Casing

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

a. Inspection Scope

Barrier Integrity Cornerstone

For the Reactor Coolant System Specific Activity Performance Indicator (PI), the inspectors reviewed licensee submittals for the period from September, 2002, through August, 2003. To verify the accuracy of the PI data reported during that period, the inspectors compared the licensee's reported data to the PI definitions and guidance contained in NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Rev. 2. The inspectors also observed licensee sampling and analysis of reactor coolant system samples, and compared the licensee-reported performance indicator data with records developed by the licensee while analyzing previous samples.

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

On September 12, 2003, the resident inspectors presented the inspection results to Mr. Tim Cleary and other members of his staff. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

C. Burton, Director of Site Operations
E. Caba, Design Engineering Superintendent
B. Clark, Manager Training
A. Cheatham, Radiation Protection Superintendent
C. Church, Engineering Manager
T. Cleary, Plant General Manager
W. Farmer, Technical Services Superintendent
R. Howell, Regulatory Support Supervisor
R. Ivey, Operations Manager
E. Kapopoulos, Outage & Scheduling Manager
J. Lucas, Nuclear Support Services Manager
G. Ludlum, Operations Training Superintendent
J. Moyer, Vice President, Robinson Nuclear Plant
E. Rothe, Nuclear Assurance Section Manager
D. Stoddard, Maintenance Manager

NRC personnel

P. Fredrickson, Chief, Reactor Projects Branch 4

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedure OMM-021, Operations During Adverse Weather Conditions

Section 1R04: Equipment Alignment

Partial System Walkdown

Auxiliary Feedwater System

System Description SD-004, Auxiliary Feedwater, Revision 7
Drawing G-190197, Feedwater, Condensate and Air Evacuation System Flow Diagram, Sheet 4 of 4, Revision 51
FSAR section 3.7.4, Auxiliary Feedwater System

Component Coolong Water System

System Description SD-013, Component Cooling Water, Revision 4
Drawing 5379-376, Flow Diagram Component Cooling System, Revision 15
FSAR section 3.7.6, Component Cooling Water System

Service Water System

FSAR section 3.7.7, Service Water System
Drawing G-190199, Service and Cooling Water System Flow Diagram, Sheet 5 of 13, Revision 43
Drawing G-190199, Service and Cooling Water System Flow Diagram, Sheet 6 of 13, Revision 40
Drawing G-190199, Service and Cooling Water System Flow Diagram, Sheet 7 of 13, Revision 38
Drawing G-190199, Service and Cooling Water System Flow Diagram, Sheet 9 of 13, Revision 52

Dedicated Shutdown Diesel Generator

Procedure OP-602, Dedicated Shutdown System, Rev. 35
Procedure OST-910, Dedicated Shutdown Diesel Generator (Monthly), Rev. 30
Procedure EPP-22, Energizing Plant Equipment Using Dedicated Shutdown Diesel Generator, Rev. 19
Drawing G-190204D, Fuel Oil System Flow Diagram, Rev. 13
Drawing 6034D06001, Fuel Oil System Schematic
Drawing 6034CO6003, Fuel Oil Level Control and Level Alarm Switch Installation
Drawing 6034D06501, Fuel Level and Alarm Panel Schematic
Design Basis Document DBD/R87038/SD16, Electrical Power Distribution System

Section 1R05: Fire Protection

Procedures

FP-012, Fire Protection Systems Minimum Equipment And Compensatory Actions, Rev. 9
FP-013, Fire Protection Surveillance Requirements, Rev. 9
OST-610, Unit 2 Portable Fire Extinguishers, Fire Hose Stations and Houses (Monthly), Rev. 39
OST-611-12, Low Voltage Fire Detection and Actuation System Zones 22 & 23 (Semi-Annual), Rev. 3
OST-625, Fire Door Inspection (Semi-Annual), Rev. 23

Drawings

HBR2-8255, Fire Protection Water System Flow Diagram, Sheet 1, Rev. 15
HBR2-8255, Fire Protection Water System Flow Diagram, Sheet 2, Rev. 17

FSAR sections & drawings

Appendix 9.5.1A, Section 3.1.3.1, Appendix R Area A3 (Fire Zone 3) Safety Injection Pump Room
Appendix 9.5.1A, Section 3.1.3.2, Appendix R Area C (Fire Zone 7), Auxiliary Building Hallway (Ground Floor)
Appendix 9.5.1A, Section 3.1.5.8, Fire Zone 22, Control Room
Appendix 9.5.1A, Section 3.8 Appendix R Area G2 (Fire Zone 30), Diesel Fuel Oil Storage Tank
Appendix 9.5.1A, Section 3.3, Appendix R Area C (Fire Zone 5), Component Cooling Pump Room
Figure 9.5.1-3, Fire Zones-Auxiliary and Reactor Buildings, Rev. 17

Section 1R11: Licensed Operator Requalification

Operations Training Full Scope Scenario, FSS-SEG-30, Rev. 9
License Operator Continuing Training, Cycle 4, 2003, Emergency Preparedness Drill

Section 1R12: Maintenance Effectiveness

RNP Maintenance Rule Database Reports
Procedure FP-012, Fire Protection Systems Minimum Equipment and Compensatory Actions, Rev. 9
Procedure FP-013, Fire Protection Systems Surveillance Requirements, Rev. 9
Procedure OST-646, Fire Suppression Water System Engine Driven Fire Pump Test (Annual), Rev. 18
Cummins Tech Manual, 727-788-63, Engine Driven Fire Pump

Section 1R14: Personnel Performance During Non-Routine Plant Evolutions

Procedure AOP-15, Secondary Load Rejection, Rev. 11

Section 1R15: Operability Evaluations

Calculation RNP-M/MECH-1642, Safety Injection Pump NPSH Improvement Line Flow Calculations (Revised Piping Configuration)
Calculation RNP-M/MECH-1637, Determination of Available NPSH for ECCS Safety Injection Pumps A, B, C in the Injection Mode of Operation
Calculation RNP-I/INST-1023, Refueling Water Storage Tank Uncertainty and Scaling Calculation
FSAR Section 6.3.2.2.3
Altran Corporation Letter, 97215-LR-001, dated July 25, 2003
Procedure PLP-102, Operability Determinations
Procedure OST-021, Daily Surveillances
Drawing 5379-1082, Sheet 2 of 5, Rev. 41

Section 1R19: Post Maintenance Testing

Procedures

OST-910, Dedicated Shutdown Diesel Generator (Monthly), Rev. 30
OP-306, Component Cooling Water, Rev. 35
OST-206, Comprehensive Flow Test for the Steam Driven Auxiliary Feedwater Pump, Rev. 39
OST-202, Steam Driven Auxiliary Feed Water System Component Test, Rev. 57
OST-401-1, EDG A Slow Speed Start, Rev. 19
OST-151-1, Safety Injection System Components Test-Pump A, Rev. 18
OST-152-1, [Safety Injection] Valve Position and [Emergency Response Facilities Information System] Indication Test-Train A, Rev. 4

Section 1R22: Surveillance Testing

Procedures

OST-051, Reactor Coolant System Leakage Evaluation, Rev. 30
OST-750-1, Control Room Emergency Ventilation System-Train A (Monthly), Rev. 11
OST-642, Main Transformer Deluge System Flow Test (Annually), Rev. 57
FHP-001, Fuel Handling Tools Operating Procedures, Rev. 27
FHP-003, Fuel Assembly Movement in the Spent Fuel Pit, Rev. 28
SFS-001, IF-300 Shipping Cask Operations, Rev. 33
OST-251-1, RHR Pump A and Components Test, Rev. 17

Section 1R23: Temporary Plant Modifications

Engineering Change 53127, [Heating Ventilation Exhaust]-6A
Engineering Change 53007, Rev. 0, Belzona Repair to A Main Feed Pump Casing

Section 4OA1: Performance Indicator Verification

REG-NGGC-0009, NRC Performance Indicators
RCP-131, Determination of RCS Radiochemical, E -Bar and I-131 Dose Equivalent, Rev. 9
Operator Logs
Licensee NRC Performance Indicator Notebook